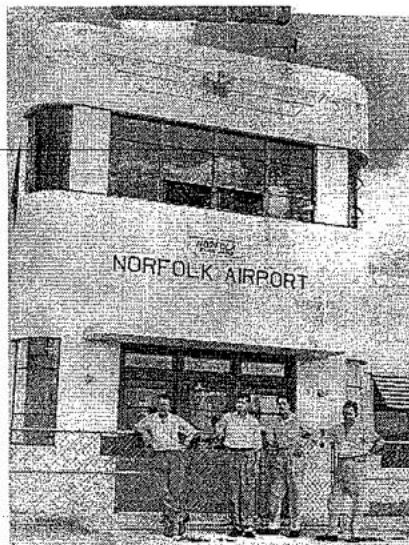


AVIATION DEVELOPMENT IN NEBRASKA

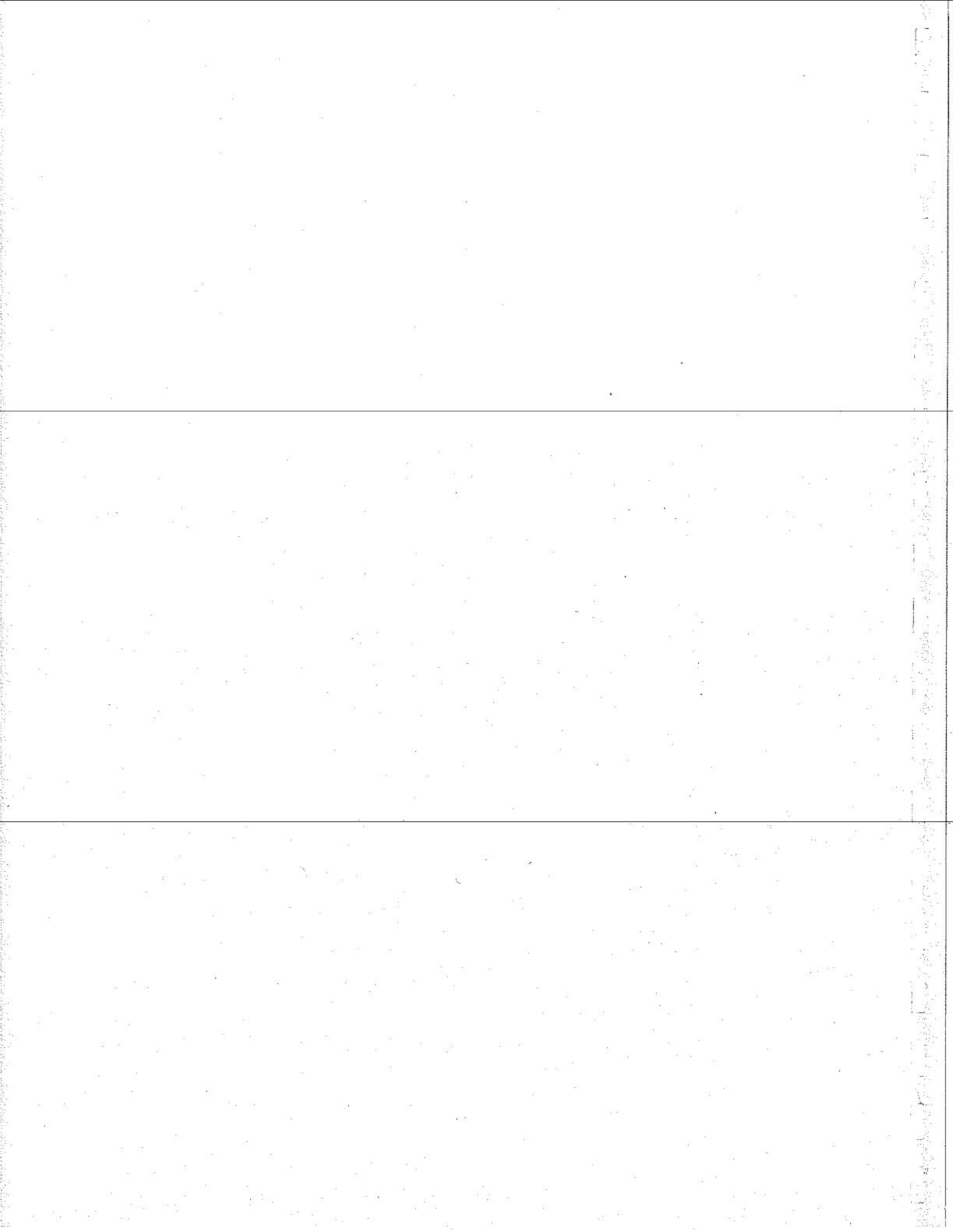
FINAL SURVEY REPORT



**PREPARED FOR
NEBRASKA STATE HISTORICAL SOCIETY
LINCOLN, NEBRASKA
AND
NEBRASKA DEPARTMENT OF AERONAUTICS
LINCOLN, NEBRASKA**

**PREPARED BY
MISSISSIPPI VALLEY ARCHAEOLOGY CENTER
AT UNIVERSITY OF WISCONSIN - LA CROSSE
BARBARA M. KOOIMAN, PRINCIPAL INVESTIGATOR**

SEPTEMBER 2000



ABSTRACT

The Nebraska State Historical Society, in collaboration with the Nebraska Department of Aeronautics in October 1999, contracted with Mississippi Valley Archaeology Center at University of Wisconsin-LaCrosse and architectural historian Barbara Kooiman to complete a Historic Context Development of Nebraska Aviation (1905 - 1960), a survey of World War II Era Aviation Facilities in Nebraska (11 sites), an amended Multiple Property Documentation form for World War II era aviation facilities in Nebraska, and a resource management plan for those properties. Kooiman surveyed a total of 103 properties on eleven former WWII army airfields in Nebraska, researched for general context and site specific information, and prepared the above-mentioned products by August 2000.

ACKNOWLEDGMENTS

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STATE AND FEDERAL RECOGNITION

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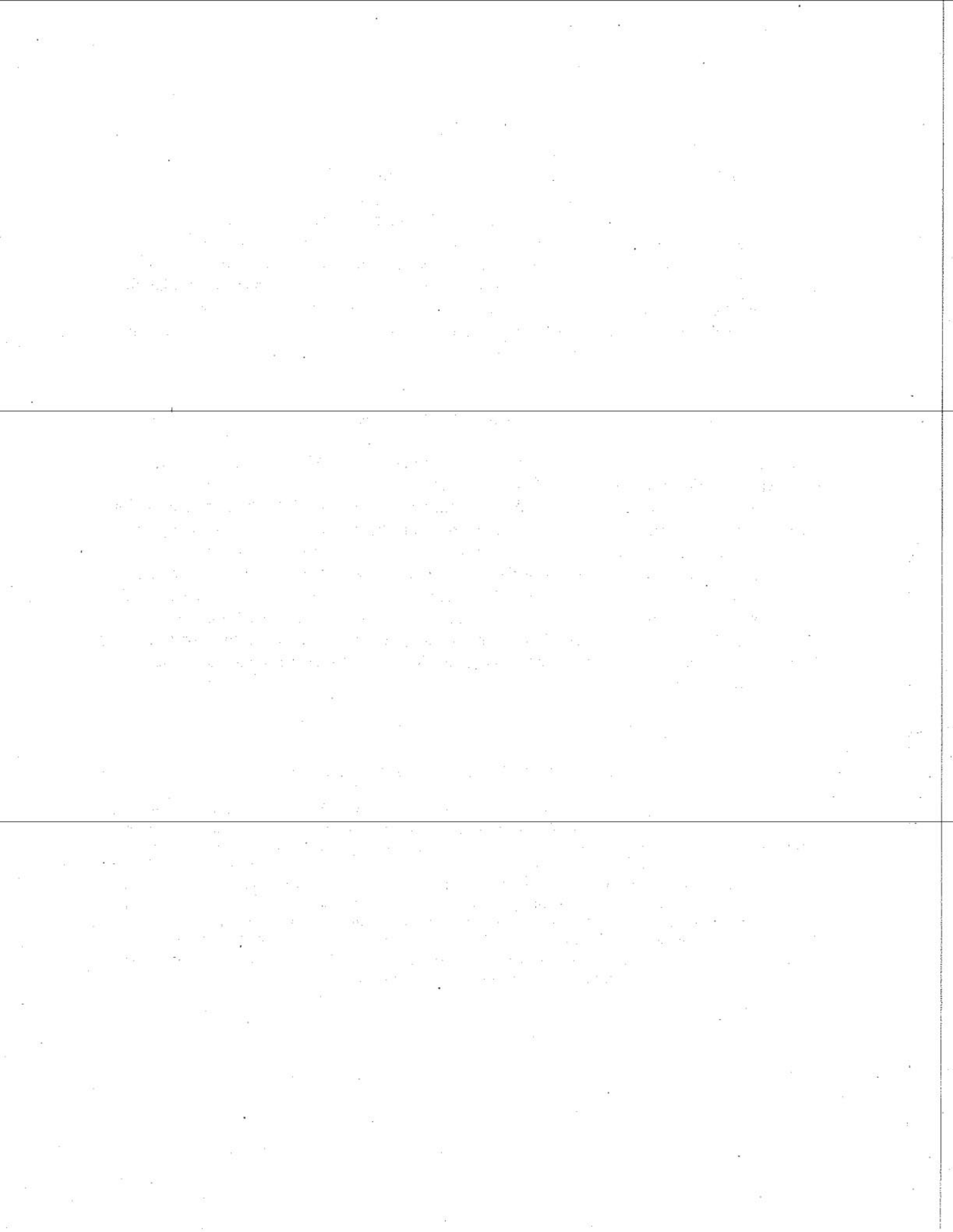
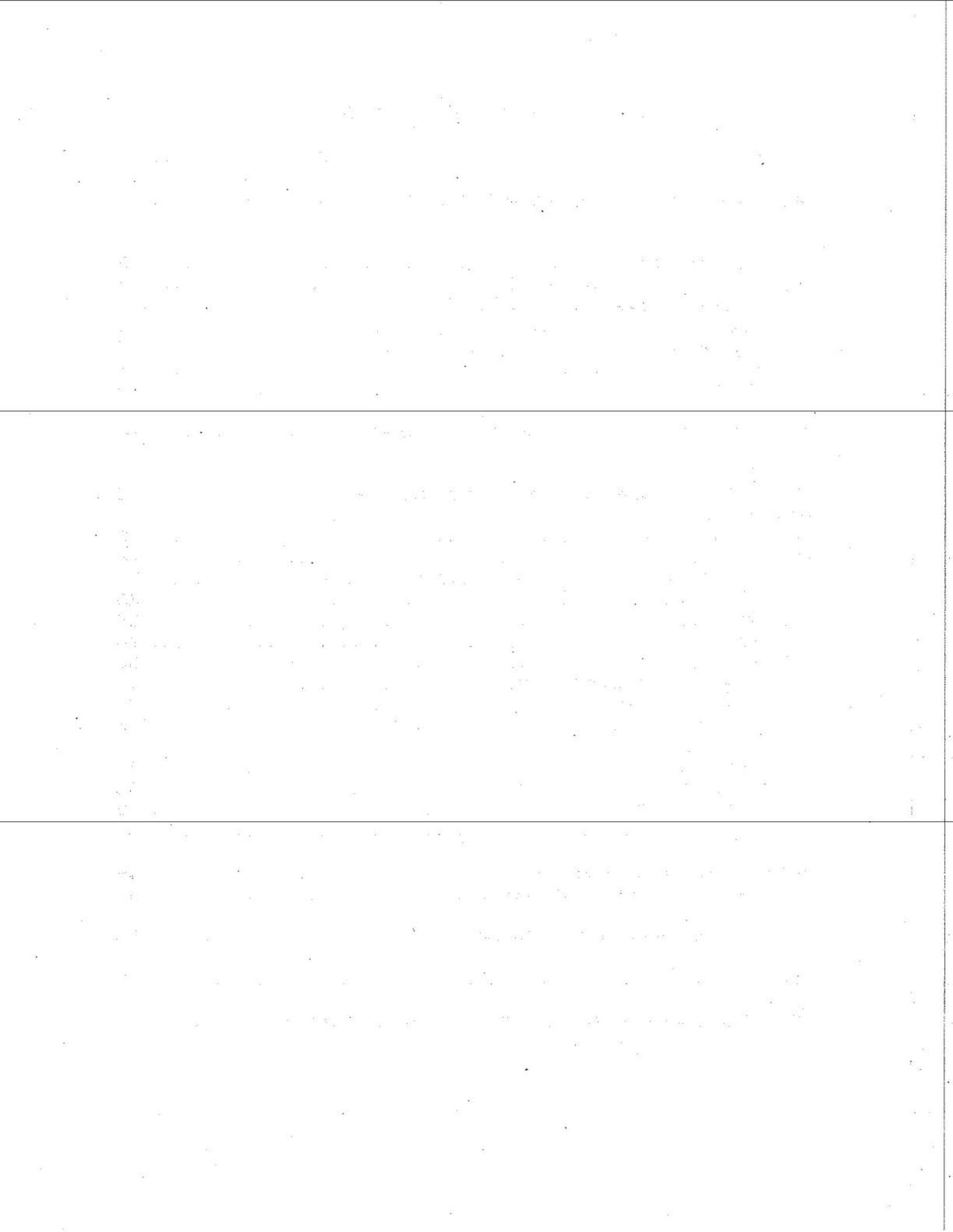


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INTRODUCTION

The Nebraska State Historical Society, in collaboration with the Nebraska Department of Aeronautics in October 1999, contracted with Mississippi Valley Archaeology Center at University of Wisconsin-LaCrosse and architectural historian Barbara Kooiman to complete a *Historic Context Development of Nebraska Aviation (1905 - 1960)*, a survey of *World War II Era Aviation Facilities in Nebraska* (11 sites), an amended Multiple Property Documentation (MPD) form for the World War II era aviation facilities in Nebraska, and a cultural resource management plan for those properties.

RESEARCH DESIGN FOR AVIATION DEVELOPMENT IN NEBRASKA

The project commenced on 8 November 1999, when Barbara Kooiman met with the staff at Nebraska Department of Aeronautics (D of A) and the Nebraska State Historic Preservation Office (NeSHPO) to discuss research avenues, review sources kept at the Department of Aeronautics and field work potential. Kooiman then made copies from the files of the D of A on November 8 and 9.

During the week of January 18 - 21, 2000, Kooiman, joined by Bill Callahan and Jill Ebers, both NeSHPO staff, conducted field work in Ainsworth, Alliance, Scottsbluff and McCook. They held public meetings at Ainsworth, Alliance and Scottsbluff, however, there was low attendance (despite the great efforts of the airport managers) at each of the sites.

During the week of February 28 - March 3, Kooiman conducted field work at Kearney (meeting with the airport manager there), Grand Island, Bruning, Fairmont, Harvard, Lincoln and Scribner. On March 3, Kooiman met with D of A staff concerning the progress of the project. During this trip, Kooiman continued research at the Nebraska State Historical Society (NSHS) archives, including published histories, news clippings, and the files of volunteer archivist Vince Goeres, who has been archiving and cataloging aviation related materials at NSHS.

During the week of April 3 - 7, 2000, Kooiman traveled to Lincoln, Nebraska to complete research and to re-survey Scribner. A meeting of the Aviation Advisory Group was held on April 5th, 7 p.m. at the Department of Aeronautics office. Kooiman updated the group on the progress of the project. Kooiman also distributed a draft copy of the *World War II Era Army Airfields in Nebraska* historic context.

Shortly after May 17, 2000, Kooiman received NeSHPO's review comments of the draft that was due February 28, 2000 and submitted in early April. Between May and August 2000, Kooiman completed a final draft of all contract requirements for this project, including the *Historic*

Context for Nebraska Aviation, circa 1905 to 1960, an amended MPD for Significant Relic Components of United States Army Airfields in Nebraska, and the final survey report for the survey of WWII era Army Airfields in Nebraska.

PART I

HISTORIC CONTEXT

NEBRASKA AVIATION, 1905 - 1960

THE BEGINNING

Aviation history in Nebraska began shortly after the Wright Brothers flew their famous first flight at Kitty Hawk, North Carolina in December 1903. Prior to the successful invention of the airplane, lighter-than-air craft such as balloons were being used for decades. As early as 1861, Professor Thaddeus S.C. Lowe went to Washington, D.C. to demonstrate the effectiveness of balloons for wartime use. He later sent the first telegraph message from a balloon to Union ground troops during the Civil War in June 1861, and effectively directed the first artillery fire from a balloon in September 1861 (Tierney, 1963, 12).

These early efforts at military aviation led to the establishment of the Balloon Corps as a branch of the Army of the Potomac in September 1861. By 1893, the Signal Corps took over the balloon section, and the balloon continued to be used as primarily a reconnaissance device during the Spanish-American War. After the war, the Signal Corps balloon detachment was established at Fort Myer, Virginia where the equipment was essentially stored. Then, the Signal Corps received orders to move the balloon detachment to Fort Omaha, Nebraska in 1905. The move was not completed until two years later when, under the guidance of Brigadier General James Allen, a balloon house and hydrogen plant was established at Fort Omaha in 1907 (Tierney, 1963, 24).

Fort Omaha, originally named Sherman Barracks after the Civil War general William Tecumseh Sherman, was established by the U.S. Army in 1868. The post's name soon changed to Omaha Barracks, then in 1879, to Fort Omaha. By the late 1880s, the 80-some acres of Fort Omaha was no longer sufficient for the Army's needs. A larger post, Fort Crook, was constructed between 1894 and 1896, approximately fifteen miles south at Bellevue, Nebraska, and Fort Omaha closed in 1896. Fort Omaha reopened when the balloon detachment arrived in 1905, with the balloon house and hydrogen plant completed in 1907 (*A Historical Map of Fort Omaha*, 1998).

Prior to establishing the balloon station at Fort Omaha, the Army had sent out inquiries to forty commercial manufacturers of hydrogen to try to establish contracts for supplying the gas compressed in steel cylinders for military use. However, all the replies were unsatisfactory, which in part led to the Army's decision to establish their own gas generation and compression plant at Fort Omaha (Chandler and Lahm, 1979: 52).

In the spring of 1907, the Chief Signal Officer in Washington approved for the balloon plant at Fort Omaha to include a steel hangar with rolling doors, a 50,000 cubic foot gas holder, a hydrogen generator and a motor-driven compressor for the storage of gas in steel cylinders. Construction began in the spring of 1908 as soon as the ground thawed, and the plant was generating hydrogen by September of that year. Earlier in 1908, the Signal Corps had purchased two spherical balloons for use at Fort Omaha (Chandler and Lahm, 1979: 101).

Balloon training began at Fort Omaha in May 1909, with a class of 20 enlisted men. Instruction entailed spreading, inflating and rigging the spherical balloons, rigging and maneuvering captive balloons, and inflating, rigging and maneuvering their own balloons. However, rapid improvements made in heavier-than-air aircraft design led to the demise of balloon and dirigible training at Fort Omaha. By October 4, 1913, Fort Omaha was closed as an active military post, and all Signal Corps equipment was transferred to Fort Leavenworth, Kansas (Chandler and Lahm, 1979: 105).

Fort Omaha was reestablished in November 1916 due to World War I, and was again the principal balloon school for the Aviation Section of the Signal Corps. As the program expanded, nearby Fort Crook, Nebraska, which eventually became Offutt Air Force Base, as well as other forts in Texas, Virginia, and California, were also opened as balloon schools. Finally, in October 1921, when Fort Omaha was considered too small for the training and operations of balloons and airplanes, all movable equipment was moved to Scott Field in Illinois. Though the fort remained functional as part of the Seventh Corps Area Headquarters, this ended Fort Omaha's aeronautic career (Chandler and Lahm, 1979: 106).

Fort Crook became home to the 61st Balloon Company, the first air unit to command the post on Sept. 10, 1918. By 1921, the transition from balloon training to airplane training began with the plowing, leveling, and seeding of 260 acres of land at Fort Crook which created an airfield suitable for frequent takeoffs and landings and a refueling point for military and government aircraft on cross-country flights. The airfield portion of Fort Crook was designated Offutt Field on May 10, 1924, in honor of 1st Lt. Jarvis J. Offutt. Offutt was killed while flying with the Royal Air Force in France and was Omaha's first World War I air casualty (www.offutt.af.mil/geninfo/history).

Like the lighter than air craft, the first military airplanes were placed under the Signal Corps of the U.S. Army. Early use of the airplane, like the balloons, was primarily for reconnaissance functions. This function severely limited the American use of the airplane during World War I, when the U.S. Army maintained only twelve aircraft, as opposed to the British and French had over 200 aircraft, and the Germans had 260 (Hartman, 1990: 226).

The National Guard was initially a militia that did not receive its current designation until the 1916 National Defense Act. Prior to this, some state militias maintained small air branches, however they were generally not supported by public funding, but by individual pilots. In 1913, the Nebraska National Guard Signal Corps began an aviation section by building a biplane in Fremont. It apparently held a reconnaissance and communications function, according to insignia seen on the plane in photos taken during the time, however there was no official recognition of this craft even in the Signal Corp's property books. Nonetheless, aviation interest continued to grow when a Nebraska Aviation Corps was officially organized in Lincoln on 19 July 1915. Their headquarters were at the Nebraska State Fair Grounds, and their first unit consisted of four officers and nine enlisted men. Their early maneuvers included the experimental dropping of bombs from the flying airplanes (Hartman, 1990: 226, 228).

Though the few pilots in Nebraska who made up the Nebraska Aviation Corps made impressive military demonstrations of reconnaissance, bombing, and even aerial photography, the confidence in the airplane for military use was not established until well after World War I, and Nebraska Guard aviation did not receive any federal funds until the late 1920s, which hampered the advancement of military use of airplanes in Nebraska (Hartman, 1990, 232).

AIR MAIL

In May 1919, the U.S. Air Service began unveiling a plan for a network of municipal airports, seeing the advantage as a defense network. The network began with thirty-two communities, nationwide, where stations were needed for mail service. By late 1922, a number of air routes were planned, including airports at Omaha and North Platte, which would aid in transcontinental airway traffic (Maurer, 1987: 150, 152).

The U.S. Air Service was created as an arm of the U.S. Army on 24 May 1918, and its replacement, the U. S. Army Air Corps, was created on 2 July 1926. One of the events in national aviation history that advanced the Air Corps' legitimacy and strength happened on 9 February 1934, when the U.S. Army Air Corps received orders to fly mail. Prior to that time, the mail was delivered first by pilots that were hired by the Postal Service, then later by airline contractors for the Postal Service. The decision to turn mail delivery over to the Air Corps was based on rumors that the government might cancel contracts with airlines who had come under contract during the previous presidential administration, with suspicion of fraud and collusion by those contractors (Maurer, 1987: 300).

On May 15, 1919 the Post Office Department opened its first air mail route between Chicago, Illinois and Cleveland, Ohio. It was so popular that a few months later a second route was opened between Chicago and New York. By September, 1920, the mail route extended cross-

country, to San Francisco, California. Simultaneous to setting up the cross-country mail routes, radio telegraph stations were established at strategic locations across the country, in Washington, D.C., Omaha, Nebraska, Elko, Nevada and Oakland, California to establish the first weather reporting system for the aviators (O'Keefe, 1961: 7).

Despite the efforts on behalf of the Post Office to establish a cross-country air route, the U.S. Congress was unimpressed, and threatened to cut off funding. In an attempt to change Congressional opposition, the Post Office planned two simultaneous flights to carry mail, one east to west, and the other west to east. On February 21, 1921, two small planes left New York, and a few hours later, two more left San Francisco to accomplish this first two-way cross-continental airmail flight. The flight was riddled with difficulties, with one of the west bound planes experiencing mechanical failure shortly into the trip, and the second west bound plane stopped in Chicago due to heavy snow. One of the east bound planes crashed in Nevada, killing the pilot. This left one plane left to perform the task (O'Keefe, 1961: 7).

The flight, though continuous, had been set up in relay fashion, with pilots changed at airfields along the route. Jack Knight was the pilot on duty at Cheyenne, Wyoming on the east bound flight. He landed the plane in North Platte, Nebraska, in the dark, and dealt with engine troubles for a few hours there. He was well-experienced in flying the North Platte to Omaha route, and thus he was given this portion of the route. He navigated that night using bonfires lit by citizens along the route, and landed at Ak-Sar-Ben Air Mail Field in Omaha at about 1:10 a.m. Cold and tired, he had planned to turn the flight over to the next relay pilot, however, no relief pilot showed. Despite cold, snow, unfamiliar terrain and darkness, Jack Knight agreed to fly across Iowa and Illinois (O'Keefe, 1961: 8).

Knight continued on through Iowa by flying at tree level with a road map, refueled in Iowa City in a blizzard and finally landed at Maywood Field in Chicago at 8:40 a.m., turning the plane over to the next relay pilot. When the plane landed in New York on February 22, 1921, it had made the trip from San Francisco in only 33 hours and 20 minutes, making aviation history of the first continuous airmail delivery, which convinced the U.S. Congress to extend the Post Office Department's lease to operate air mail planes (O'Keefe, 1961: 9).

Despite Jack Knight's night flight across Iowa and Illinois, night flying did not become common until 1923, when the Post Office Department placed into service the first lighted airway between Cheyenne and Chicago, completely overflying Nebraska. The lighted route included acetylene gas blinker lights spaced approximately three miles apart. The pilots understood that the ground near each light was relatively flat and could be used in the event of an emergency landing, though with some risk. The route in Nebraska started at Omaha, and continued over Gretna, Ashland, Waverly, Lincoln, Malcolm, Seward, Utica, Waco, York, Bradshaw, Aurora and Grand Island. At Grand Island, the airway followed towns along the Platte River, including Wood River,

Sheldon, Gibbon, Kearney, Odessa, Elm Creek, Overton, Lexington, Cozad, Gothenburg, Brady, Maxwell and North Platte. At North Platte, the airmail route then followed the South Platte River, continuing westward over Hershey, Paxton, Roscoe, Ogallala, Brule, Big Springs, Chappell, Lodgepole, Sunol, Sidney, Brownson, Potter, Dix and Kimball. By 1925, several of these communities switched to electric field beacons, with the first installed in Omaha prior to April 1925 (O'Keefe, 1961: 9 - 11).

The Kelly Act, passed by Congress in 1925, allowed the Postmaster General to let contracts to private operators to carry the mail, which was a huge boost to the commercial aviation industry. Airline companies bid to become mail carriers, which could be done in conjunction with passenger flights, making them very profitable.

As aviation became more commercially viable, and a greater number of planes were in the air, the need for better navigational devices was evident. Radio navigational transmitters were the first wave of this type of device, put into use first in 1927, with Omaha being the first city in Nebraska to receive a low frequency radio range station in 1929. North Platte was the second city in Nebraska to receive a radio station, in 1930, with Lincoln receiving one in 1940, Scottsbluff in 1941 and Grand Island in late 1943. Though the radio system allowed safer flying conditions when instrument flying was the only safe way to fly, the airports became crowded with airway communications, and increased air traffic overloaded the system (O'Keefe, 1961: 12-14).

In 1935, the Nebraska legislature passed Bill LB-30, Nebraska Aeronautics Commission Act, establishing the Aeronautics Commission. Its purpose was to provide for the collection and disbursement of a fund levied on gasoline used in aircraft. It also defined regulations for flight and enforced aeronautical rules in Nebraska. As the gasoline fund grew, the Aeronautics Commission began allocating funds to aid in the construction and improvement of airports in the state. Between 1935 and 1947, the Commission contributed over \$38,000 in development of airports (O'Keefe, 1961: 18).

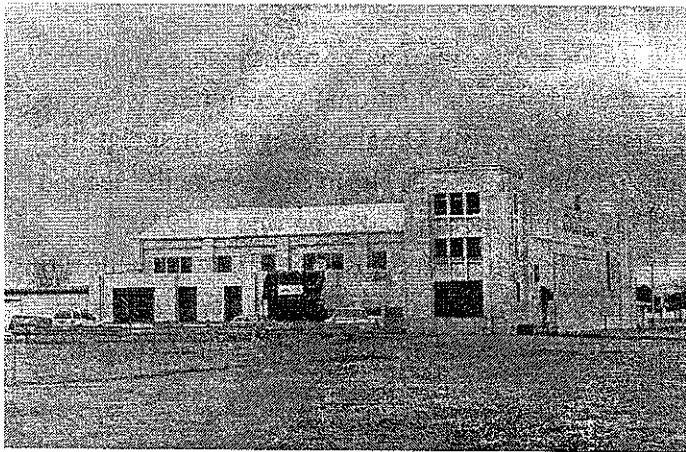
NATIONAL DEFENSE

National defense became an important issue in June 1920, when the U.S. Congress passed the National Defense Act. This act allowed for enlargement of the regular army, as well as providing for an officers' reserve corps and federalizing the National Guard, which essentially replaced the state militias. All national defense programs which followed, through World War II, stemmed from the National Defense Act.

In March 1935, the War Department ordered that the General Headquarters (GHQ) Air Force of the United States be created to assume control over tactical units under the direction of the

General Staff. It existed side by side with the U.S. Air Corps. However, due to differences between the two commands, by March 1939 GHQ Air Force came under the responsibility of the Chief of Air Corps. (Tierney, 1963: 38-9).

The Civil Aeronautics Act of 1938 was responsible for creating the Civil Aeronautics Board and the Civil Aeronautics Administration (CAA). The Civil Aeronautics Board was responsible for issuing and overseeing aircraft and pilot certification and suspension. In addition, this Act issued air carrier route certificates and regulated airline fares. It was also responsible for investigating aircraft accidents. The Civil Aeronautics Administration was responsible for aviation regulations, airways, navigational facilities, control towers and responsible for compliance of aviation regulations. In 1940 Congress appropriated money for the Development of Landing



GRAND ISLAND NATIONAL DEFENSE HANGAR

Areas for National Defense (DLAND) and the Civil Aeronautics Administration distributed this money to ultimately build up or improve 986 civilian airports in the United States which had potential military use (Tierney, 1963: 38-9).

As it appeared imminent that the U.S. would be entering the war in Europe in 1941, the Army Air Forces (AAF) were created by Army Regulation 95-5, dated 20 June 1941. The AAF was headed by a chief who was also Deputy Chief of Staff

for Air. The Chief coordinated and directed the Air Corps, the Air Force Combat Command (formerly the GHQ Air Force) and all other air elements. On 9 March 1942, the War Department created autonomous and co-equal commands within its framework, made up of the Army Ground Forces, the Army Air Forces, and the Army Service Forces. Under this reorganization, the office of Chief of Air Corps and Air Force Combat Command were dissolved, with all elements of the air arm incorporated into the AAF under a single commanding general and a single air staff (Tierney, 1963: 39).

By 1941, there were a total of fifty airports in Nebraska, as opposed to only twelve in 1928. In 1941, there were 51 more airports proposed to be constructed in Nebraska, pending approval based on priority. Priorities were determined on the basis of the air route on which the airport was located as an emergency landing field, or where the airport served a large trading center or accredited flying school. By February 1942, the Civil Aeronautics Administration had issued a regulation that required all airports to keep a 24 hour guard, recording all incoming and outgoing flights. This regulation, which was a national defense measure, impeded the expansion of civil airports in the state until after World War II (O'Keefe, 1961: 28).

The Civilian Pilot Training Program (CPTP), established by the federal Civilian Aeronautics Administration, filled a pre-war need for more pilots shortly after its organization was announced by President Franklin D. Roosevelt in December 1938. The CPTP program was initiated in Nebraska in June 1941. The program selected students from colleges and universities in the state, having them complete a flight instruction program, which by 1942 included glider training. By December 1942, the Civilian Pilot Training Program was reorganized as the War Training Service and was utilized as a pre-training for regular Army and Navy combat flight training (O'Keefe, 1961: 34).

The Civil Air Patrol (CAP) was incorporated as a benevolent non-profit organization in 1946 under Public Law 476 of the 79th U.S. Congress. It was established as an Auxiliary of the United States Air Force in 1948. The program was designed to conduct aviation orientation and training, and to assist in military and civilian aviation exercises as needed (O'Keefe, 1961: 33).

WWII

ESTABLISHMENT OF ARMY AIRFIELDS IN NEBRASKA

As early as September 1940 President Roosevelt's Advisory Commission to the Council of National Defense gathered information on where to place army airfields in the midwestern states. The east and west coasts were thought vulnerable to potential attack, and the midwest was considered a safe place to put defense training sites, manufacturing facilities, and installations (Hurst, 1995: 129).

Through surveys conducted in 1940 and 1941, the U.S. Army Air Force found Nebraska ideal for training purposes. Meteorologists decided that the state had excellent year-round flying conditions. Additionally, Nebraska was lightly populated with large open areas which would provide numerous locations for gunnery, bombing and training ranges. The land was relatively inexpensive. The state was intersected with many reliable railroad lines which could transport troops and material to Airfields and training facilities. Nebraska also had a strong public utilities system, which meant that the United States military would need to deal with few facilities to obtain electricity for airfields and training facilities. Finally, Nebraska's Senator George W. Norris was instrumental in lobbying for military facilities for his state (Larsen, 1986: 239).

A total of twelve army Airfields were constructed and utilized in Nebraska during World War II. The sites were located strategically across the state, from the eastern-most location of Offutt Field at Fort Crook near Omaha, to the western-most locations of Alliance and Scottsbluff, to the northern-most site of Ainsworth, and the southern-most location at McCook. Harvard, Fairmont and Bruning were clustered close together, supporting one another with certain facilities. Grand

Island and Kearney were built at existing National Defense airport sites, under earlier National Defense Act funding programs. Lincoln and Offutt Field at Fort Crook were also located at pre-existing airports.

Though Nebraska was an important location for the construction of WWII army airfields, these fields were constructed in 46 of the 48 states, as well as Washington, D.C., with the highest numbers being built in California (82 fields) and Texas (84 fields). In the Great Plains states, the highest number constructed were in Kansas (27 fields), while other Nebraska neighboring states had fewer, including Iowa (3 fields), South Dakota (5 fields), Wyoming (2 fields), and Colorado (11 fields) (Thole, 1999: 161-8).

Construction of these facilities was based on standardized plans and architectural drawings, with the buildings designed to be the "cheapest, temporary character with structural stability only sufficient to meet the needs of the service which the structure is intended to fulfill during the period of its contemplated war use." To conserve critical materials, most facilities were constructed of wood, concrete, brick, gypsum board and concrete asbestos. Metal was sparsely used. Each facility was designed to be nearly self-sufficient, with not only hangars, but barracks, mess halls, even hospitals and recreation centers (Hurst, 1995: 130).

Currently, of the twelve World War II Army Airfields in Nebraska, six are municipal airports (Ainsworth, Alliance, Scottsbluff, Lincoln, Kearney, Grand Island), four are owned by the Nebraska Department of Aeronautics (three, Harvard, Fairmont and Scribner, are operated as state airfields, and one, Bruning, is not), one is privately owned (McCook) and one is Offutt Air Force Base.



KEARNEY ARMY AIRFIELD, WWII

POST WAR

After the war, with many of the nation's airports in poor repair, the Federal government developed the National Airport Plan, which recommended airport improvements to take place over several years. In Nebraska, the federal funds were dispersed and supervised by the Nebraska Aeronautics Commission. In the first year of the program, fourteen new airports were

constructed in the state, with improvements made to sixteen others (O'Keefe, 1961: 28).

World War II aviation expansion, with the training of army pilots all over the country and high airway traffic throughout the war years, led to the rapid improvement of aviation communications and navigation. The Very High Frequency Omni Range, or VOR, was developed, using VHF radio bands and multiple courses for radio contact and navigational aids for pilots. The first VOR station in Nebraska was installed at Omaha in January 1948. Later that same year VORs were located at Grand Island and North Platte (O'Keefe, 1961: 15).



FAIRMONT STATE AIRFIELD, APRIL 2000

The Nebraska State Legislature passed L. B. 30, known as the Nebraska Aeronautics Commission Act, to create the Nebraska Aeronautics Commission in 1935. The Commission's function was to regulate civilian aviation personnel, aviation schools and all aspects of aviation in the state. They set standards of safety by licensing airports and landing fields which met minimum safety requirements, setting up state-wide air marking systems to guide pilots from the air, disseminate information about aviation in Nebraska, and regulating flight training schools in the state (Nebraska Aeronautics Commission, 1940: 1).

The Nebraska Aeronautics Commission Act was repealed by the 1945 Legislature and the State Aeronautics Act was enacted, L.B. 282, creating the Department of Aeronautics. The department required that an airport be owned by a municipality to be eligible for federal funds. All airports, whether they were publically or privately owned, were required to make applications to the Department of Aeronautics for approval of their site and the general purpose for the airport. The Department determined that airports should not be located too close to towns because of the danger of accidents. Undesirable obstructions were not to be near, and the location should have easy access. Proximity to other airports was a deciding factor, because if it were too close, air traffic could be too congested. Adequate provisions for expansion was to be allowed for, and the topography should be such that it could be developed for a landing strip without extreme expense (Nebraska Department of Aeronautics, 1947: 11).

In 1947, the Nebraska Department of Aeronautics began negotiating with the War Assets Administration for the acquisition of five surplus airfields by the state of Nebraska. These airports were acquired for use as state airports, and they were located at Bruning, Fairmont, Harvard, Scribner, and McCook. McCook State Airfield was turned over to the city of McCook

in 1950, then turned back to the state again in 1952, when the location of the former McCook Army Airfield, nine miles northwest of McCook city limits was found to be inconveniently far from town. McCook, instead, constructed a new municipal airport immediately northeast of the city (Nebraska Department of Aeronautics, 1947: 15; 1950: 21).

In 1948, through an agreement with the Department of Roads and Irrigation, the engineering personnel of that department were made available to the Department of Aeronautics for airport development. In addition to runway, taxiway and apron development, several airports were designed with simple administration buildings, which were equipped with plumbing and electricity. This agreement continued until 1958, when the Department of Aeronautics continued their engineered projects with their own, internal staff (Nebraska Department of Aeronautics, 1950: 1-2; 1958: 1).

Between 1947 and 1960, the Department of Aeronautics in their Merged Airport Program expended over \$5,730,000 in state and municipal funds and over \$5,347,000 in federal funds, developing 143 municipal airport projects, for a combined expenditure of over \$11 million. Between 1947 and 1949, the first state/federal aid projects were primarily development of turf and concrete landing strips, however, by 1950, several of the projects included the construction of small, standard plan metal or concrete block administration buildings. This trend of constructing administration buildings peaked in 1951, when eleven were constructed (see Appendix A). In 1955, Nebraska implemented the Nebraska State Hangar Program to assist municipal airports in acquiring hangars for airplane storage. This program was designed to take the initial burden off the airplane owner, who would not want to construct on municipal property, and the municipal airport, who could not afford it. It was set up as a revolving loan fund, to be paid back through the revenues of rental of hangar space. To save on commercial costs, the Department of Aeronautics engineers designed an affordable metal hangar, which could be modified for multiple units (see Appendix A). In the first year, Stuart-Atkinson, Creighton, Hebron, McCook, Cole, Scottsbluff and Sidney signed up for the construction of "T" hangars. (Nebraska Department of Aeronautics, 1960: IV).

Military aviation in the post-war era continued to hold importance in Nebraska. In June 1946, the Army Air Force combined Offutt Field, which was the landing field adjacent to Fort Crook, the Glenn L. Martin Bomber building, and the buildings of Fort Crook under the designation of Offutt Field. Just eighteen months later, on Jan. 13, 1948, Offutt Field transferred to the new Department of the Air Force and became Offutt Air Force Base. Later that same year, on Sept. 26, the 3902nd Air Base Wing became the host unit at Offutt (www.offutt.af.mil/geninfo/history).

At one minute past midnight, Nov. 9, 1948, Offutt gained international prominence when it became the host base for Headquarters Strategic Air Command. Air Force Secretary Stuart Symington chose to locate the Air Force's crucial command control for long-range atomic strike force at Offutt primarily because the base was centrally located on the North American continent, placing it well beyond the existing range of potential hostile bombers or missiles (www.offutt.af.mil/geninfo/history).

The old frontier fort underwent startling changes in the Cold War years that followed. Operations at Offutt included the basing of alert bombers and tankers in the late 1950s and 1960s, support for intercontinental ballistic missile sites in Nebraska and Iowa in the 1960s, and worldwide reconnaissance from the mid-1960s to the present (www.offutt.af.mil/geninfo/history).

The establishment of the Joint Strategic Target Planning Staff in 1960, the Looking Glass airborne command post in 1961, the activation of Air Force Global Weather Central in 1969, and the arrival of the National Emergency Airborne Command Post mission in 1977 further enhanced Offutt's role as a center of military importance (www.offutt.af.mil/geninfo/history).

The rapid development of aviation, particularly after World War II, is evident in Nebraska by looking at the statistics. In 1928 there were only twelve airports. By 1941 there were fifty. In 1947, according to the first report of the Nebraska Department of Aeronautics, there were 123 airports. Only ten years later, in 1957, that number nearly doubled to 240 airports. By 1960, there were 246 airports in Nebraska, seventy-five of which were municipal airfields (see Appendix B: Airports in Nebraska, 1947 to 1960).

NEBRASKA AVIATION, 1905 - 1960

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PART II

WORLD WAR II ERA AVIATION FACILITIES IN NEBRASKA

INTRODUCTION

The study of World War II era aviation facilities has been an ongoing project for the Nebraska State Historical Society since at least 1991. Most of these properties were not, at that time, quite fifty years old. However, their obvious significance spurred the Nebraska State Historic Preservation Office (NeSHPO) to complete an inventory of remaining buildings, sites, structures and objects associated with these facilities and to evaluate their National Register eligibility. This study attempts to put these World War II army Airfields in context into a national, state and local historic context.

In 1991, the Nebraska State Historical Society conducted a reconnaissance historic building inventory of eleven World War II era Army airfields in Nebraska, including Ainsworth, Alliance, Bruning, Fairmont, Grand Island, Harvard, Kearney, Lincoln, McCook, Scottsbluff and Scribner. This work was conducted between October 1990 and April 1991 by Robert Hurst, USAF ret. and Historic Preservation Review Board member, with the assistance of Tom Buecker, curator of Fort Robinson State Historic Site, and Greg Miller, NeSHPO staff. The 1991 survey identified a total of 142 properties at the eleven sites.

In 1999-2000, the NSHS hired architectural historian Barbara Kooiman to re-survey the properties that Hurst et al surveyed in 1991, and to prepare a historic context with updated National Register evaluations. She resurveyed the eleven sites, and found 103 properties, thirty-nine less than the Hurst survey had found. What follows is the historic context, registration requirements and cultural resource management plan for these sites.

NATIONAL CONTEXT

Military aviation in the United States began with the introduction of lighter-than-air craft as observation vehicles during the Civil War. In 1861, the Union armies employed balloons to have observers report the location, numbers and artillery of enemy troops. The information was relayed through flag signals, written messages dropped from the balloon, and in some instances where a line would hold, through telegraph. Balloon observation was continued by the Union Army until June 1863 (Chandler, 1943: 26-7).

Though balloons were used for military purposes during the Civil War, the addition of the balloon section as a division of the Signal Corps in 1892 marks the first official military

aeronautic organization of the U.S. Army. Development of the use of balloons for military purposes led to the use of balloons during the Spanish-American War, in particular at the battle of San Juan Hill in Cuba. (Chandler, 1943: 45-50).

Orville and Wilbur Wright were the first to successfully fly their a heavier-than-air powered aircraft at Kitty Hawk, North Carolina on 17 December, 1903, and the military wasted little time in commissioning their own airplanes. In February 1908 the Army received over forty bids for military airplanes, and three were selected, including the Wright brothers of Dayton, Ohio. Only the Wright Brother's airplane was delivered and accepted by the army. The prototype airplane was successfully flown in September 1908 at Fort Myer, Virginia. Despite a bad accident where Orville Wright was seriously injured and his passenger was killed, the Wrights made improvements to their plane for the Army, and continued tests in 1909. By 1912, the Army had a total of twelve pilots and twelve airplanes (Tierney, 1963: 29-36).

The Aviation Section of the Signal Corps was created on 18 July 1914 by Congress, and the Bureau of Aircraft Production and Division of Military Aeronautics were created on 21 May 1918 and placed directly under the Secretary of War. During World War I, 39 aero squadrons participated in action against the enemy, including pursuit, corps observation, army observation, night bombardment, and reconnaissance. Clearly, aviation had a place in the military (Tierney, 1963: 38).

The Air Service (formerly part of the Signal Corps) was created on 24 May 1918, and the Air Corps was created on 2 July 1926. One of the events in national aviation history that advanced the Air Corps' legitimacy and strength was on 9 February 1934, the U.S. Army Air Corps received orders to fly mail. Prior to that time, the mail was delivered first by pilots that were hired by the Postal Service, then later by airline contractors for the Postal Service. The decision to turn mail delivery over to the Air Corps was based on rumors that the government may cancel contracts with airlines who had come under contract during the previous presidential administration, and there was currently suspicion of fraud and collusion by those contractors (Mauer, 1987: 300).

Though advancement in aeronautics slowed considerably between the end of World War I and the mid 1930s, the rise of the Nazi party in Europe forced the United States military to pay attention to military expansion again. In March 1935, the War Department ordered that the General Headquarters (GHQ) Air Force of the United States be created to assume control over tactical units under the direction of the General Staff. It existed side by side with the U.S. Air Corps. However, due to differences between the two commands, by March 1939 GHQ Air Force came under the responsibility of the Chief of Air Corps. As a response to the increasing pressure from Europe and at home for the United States rather than the General Staff (Tierney, 1963: 38-9).

As a response to the increasing pressure from Europe and at home for the United States to take a more active role in the European war, in 1940 Congress appropriated money for the Development of Landing Areas for National Defense (DLAND) and the Civil Aeronautics Administration distributed this money to ultimately build up or improve 986 civilian airports in the United States which had potential military use.

As the war in Europe escalated, the United States increasingly expanded their military powers as they came out of isolation. Finally, on 7 December 1941, the Japanese attacked Pearl Harbor, Hawaii, and pulled the United States directly into the war. War was declared on Japan the next day. At the time of the Pearl Harbor attack, thanks to the DLAND program, there were 114 airfields designated for military use in the United States. Within months, the U.S. Army Air Forces had produced over 60,000 tactical and training aircraft, and constructed hundreds of new Airfields. The number of Army Air Force airfields peaked in 1943, when there were 345 main bases, 116 subbases and 322 auxiliary fields. The construction and planning continued until the end of the war (Hurst, 1995: 130; Murdock, 1997: 4).

The largest number of fields constructed during this period were in California (82 bases) and Texas (84 bases). They were built in forty-six states as well as Washington, D.C. These bases ranged in size from approximately 2,000 acres for a basic flight training base to over 65,000 acres for a base that taught gunnery. For example, these bases were usually built on predominantly agricultural land, demolishing or moving hundreds of private residences and other buildings typically off from farm land. The airfields generally had hangars, barracks, warehouses, hospitals, dental clinics, dining halls and maintenance buildings. Because of the urgent need for these bases, and the shortage of critical materials such as metal, most buildings were constructed using what is referred to as "Theater of Operation" construction, which was simple wood frame with tar-paper siding, and concrete foundations (Thole, 1999: 1).

The U.S. Air Force was created as its own branch of the military on 6 July 1947, under the National Security Act of 1947. At that time, there were only ninety major active airfields which were considered Air Force facilities. After WWII, a handful of the army airfields that were constructed in such haste around the country were taken over by the newly created U.S. Air Force, for expansion into cold-war era facilities. For example, Offutt Field near Omaha, Nebraska was redesignated as Offutt Air Force Base and the Air Force developed it into the Strategic Air Command (SAC) Headquarters. Many of the remaining airfields were turned over to the local communities or host states for continued use as civilian airports. (Tierney, 1963: 39; Murdock, 1997: 4).

During the closing of many of these Army airfields, a great deal of surplus material was in need of disposal in a relatively short time. These bases, which often encompassed thousands of acres

of land, hundreds of buildings, and vast amounts of surplus materials including airplane parts, vehicles, training equipment, office equipment, barracks furniture, hospital equipment and furniture, recreational equipment, and all of the miscellaneous items that made up a functional Army air base, needed to be liquidated quickly so that soldiers could go home and property could be transferred. Surplus material was given to local governments and schools, and other types of materials were sold through advertisements. Much of the material was burned and buried in trenches on the base (Thole, 1999: 8).

The U.S. Air Force continued to build new bases and develop some of the WWII era airfields during the Cold War. Despite fluctuations in the number of Air Force bases during the Berlin Airlift, the Korean War, Cold War/Soviet threats, and the Vietnam War, by 1982, the U.S. Air Force had eighty-nine active bases in the United States, twenty-one of which existed prior to World War II, fifty-seven which were built during World War II, and eleven more which opened after World War II (Murdock, 1997: 5).

A statistical study performed in 1997 by a graduate student at Embry-Riddle Aeronautical University reveals that 389 major airfields were constructed and/or used as WWII Army airfields in the United States. The study indicated that in 1995 most of them (70%) were then civil airports, though a small percentage also supported some military use. A smaller number (21%) were military airports, though some supported some civilian use) and a very small number (9% or a total of 36 airfields) no longer supported flying operations of any kind (Murdock, 1997: 13).

STATE CONTEXT

Aviation history in Nebraska began shortly after the Wright Brothers flew their famous first flight at Kitty Hawk, North Carolina in December 1903. Prior to the successful invention of the airplane, lighter than air craft such as balloons were being used for decades. As early as 1861, Professor Thaddeus S.C. Lowe went to Washington, D.C. to demonstrate the effectiveness of balloons for wartime use. He later sent the first telegraph message from a balloon to Union ground troops in June 1861, and effectively directed the first artillery fire from a balloon in September 1861 (Tierney, 1963, 12).

These early efforts at military aviation led to the establishment of the Balloon Corps as a branch of the Army of the Potomac in September 1861. By 1893, the Signal Corps took over the balloon section, and the balloon continued to be used as primarily a reconnaissance device during the Spanish-American War. After the war, the Signal Corps balloon detachment was established at Fort Myer, where the equipment was essentially stored. First, the Signal Corps transferred its school from Fort Myer to the facilities at Fort Omaha in 1907, after receiving approval from the Army in 1905 for the move. Then, under the guidance of Brigadier General James Allen, a

balloon house and hydrogen plant was established at Fort Omaha in 1907 (Tierney, 1963, 24).

Prior to establishing the balloon station at Fort Omaha, the Army had sent out inquiries to forty commercial manufacturers of hydrogen to try to establish contracts for supplying the gas compressed in steel cylinders for military use. However, all the replies were unsatisfactory, which in part led to the Army's decision to establish their own gas generation and compression plant at Fort Omaha (Chandler and Lahm, 1979: 52).

In the spring of 1907, the Chief Signal Officer in Washington approved for the balloon plant at Fort Omaha to include a steel hangar with rolling doors, a 50,000 cubic foot gas holder, a hydrogen generator and a motor-driven compressor for the storage of gas in steel cylinders. Construction began in the spring of 1908 as soon as the ground was thawed, and the plant was generating hydrogen by September of that year. Earlier in 1908, the Signal Corps had purchased two spherical balloons for use at Fort Omaha (Chandler and Lahm, 1979: 101).

Balloon training began at Fort Omaha in May 1909, with a class of 20 enlisted men. Instruction entailed spreading, inflating and rigging the spherical balloons, rigging and maneuvering captive balloons, and inflating, rigging and maneuvering their own balloons. However, rapid improvements on "heavier-than-air" aircraft design led to the demise of the balloon and dirigible training at Fort Omaha. By October 4, 1913, Fort Omaha was closed as an active military post, and all Signal Corps equipment was transferred to Fort Leavenworth (Chandler and Lahm, 1979: 105).

Fort Omaha was reestablished in November 1916 due to WWI, and was the principal balloon school for the Aviation Section of the Signal Corps. As the program expanded, nearby Fort Crook, Nebraska as well as other forts in Texas, Virginia, and California were also opened. Finally, in October 1921, when Fort Omaha was considered too small for the training and operations of balloons and airplanes, all movable equipment was moved to Scott Field in Illinois. Though the fort remained functional as part of the Seventh Corps Area Headquarters, this ended Fort Omaha's aeronautic career (Chandler and Lahm, 1979: 106).

Like the lighter than air craft, the first military airplanes were placed under the Signal Corps of the U.S. Army. Early use of the airplane, like the balloons, was primarily for reconnaissance functions. This function severely limited the American use of the airplane during World War I, when the U.S. Army maintained only twelve aircraft, as opposed to the British and French had over 200 aircraft, and the German had 260 (Hartman, 1990: 226).

The National Guard was initially a militia that did not receive its current designation until the 1916 National Defense Act. Prior to this, some state militias maintained small air branches, however they were generally not supported by public funding, but by individual pilots. In 1913,

the Nebraska National Guard Signal Corps began an aviation section by building a biplane in Fremont. It apparently held a reconnaissance and communications function, according to insignia seen on the plane in photos taken during the time, however there was no official recognition of this craft even in the Signal Corp's property books. Nonetheless, aviation interest continued to grow when a Nebraska Aviation Corps was officially organized in Lincoln on 19 July 1915. Their headquarters were at the Nebraska State Fair Grounds, and their first unit consisted of four officers and nine enlisted men. Their early maneuvers included the experimental dropping of bombs from the flying airplanes (Hartman, 1990: 226, 228).

Though the few pilots in Nebraska who made up the Nebraska Aviation Corps made impressive military demonstrations of reconnaissance, bombing, and even aerial photography, the confidence in the airplane for military use was not established until well after World War I, and Nebraska Guard aviation did not receive any federal funds until the late 1920s, which hampered the advancement of military use of airplanes in Nebraska (Hartman, 1990, 232).

In May 1919, the U.S. Air Service began unveiling a plan for a network of municipal airports, seeing the advantage as a defense network. The network began with thirty-two communities, nationwide, where stations were needed for mail service. By late 1922, a number of air routes were planned, including airports at Omaha and North Platte, which would aid in transcontinental airway traffic (Maurer, 1987: 150, 152).

Throughout the 1930s, the United States, due to their policy of isolationism from the world and their struggle with the effects of the Great Depression, did not expand on military aviation in Nebraska to a great extent. The exception was the development of a handful of Nebraska airfields as National Defense airports in the late 1930s, built utilizing federal New Deal WPA funds and Civil Aeronautics Administration funds. With the expansion of Hitler's troops in Europe in the late 1930s, however, that was soon to change.

As early as September 1940 President Roosevelt's Advisory Commission to the Council of National Defense gathered information on where to place army airfields in the midwestern states. The east and west coasts were thought vulnerable to potential attack, and the midwest was considered a safe place to put defense training sites, manufacturing facilities, and installations (Hurst, 1995: 129).

Through surveys conducted in 1940 and 1941, the U.S. Army Air Force found Nebraska ideal for training purposes. Meteorologists decided that the state had excellent year-round flying conditions. Additionally, Nebraska was lightly populated with large open areas which would provide numerous locations for gunnery, bombing and training ranges. The land was relatively inexpensive. The state was intersected with many reliable railroad lines which could transport troops and material to Airfields and training facilities. Nebraska also had a strong public utilities

system, which meant that the United States military would need to deal with few facilities to obtain electricity for airfields and training facilities. Finally, Nebraska's Senator George W. Norris was instrumental in lobbying for military facilities for his state (Larsen, 1986: 239).



STEEL HANGAR, KEARNEY ARMY AIRFIELD, APRIL 2000

A total of twelve army Airfields were constructed and utilized in Nebraska during World War II. The sites were located strategically across the state, from the eastern-most location of Offutt Field at Fort Crook near Omaha, to the western-most locations of Alliance and Scottsbluff, to the northern-most site of Ainsworth, and the southern-most location at McCook. Harvard, Fairmont and Bruning were clustered close together, supporting one another with certain facilities. Grand Island and Kearney were built at existing National Defense airport sites, under earlier

National Defense Act funding programs. Lincoln and Offutt Field at Fort Crook were also located at pre-existing airports.

Though Nebraska was an important location for the construction of WWII army airfields, these fields were constructed in 46 of the 48 states, as well as Washington, D.C., with the highest numbers being built in California (82 fields) and Texas (84 fields). In the Great Plains states, the highest number constructed were in Kansas (27 fields), while other Nebraska neighboring states had fewer, including Iowa (3 fields), South Dakota (5 fields), Wyoming (2 fields), and Colorado (11 fields) (Thole, 1999: 161-8).

Construction of these facilities was based on standardized plans and architectural drawings, with the buildings designed to be the "cheapest, temporary character with structural stability only sufficient to meet the needs of the service which the structure is intended to fulfill during the period of its contemplated war use." To conserve critical materials, most facilities were constructed of wood, concrete, brick, gypsum board and concrete asbestos. Metal was sparsely used. Each facility was designed to be nearly self-sufficient, with not only hangars, but barracks, mess halls, even hospitals and recreation centers (Hurst, 1995: 130).

Currently, of the twelve World War II Army Airfields in Nebraska, six are municipal airports (Ainsworth, Alliance, Scottsbluff, Lincoln, Kearney, Grand Island), four are owned by the Nebraska Department of Aeronautics (three, Harvard, Fairmont and Scribner, are operated as

state airfields, and one, Bruning, is not), one is privately owned (McCook) and one is Offutt Air Force Base.

INDIVIDUAL NEBRASKA ARMY AIRFIELDS

AINSWORTH ARMY AIRFIELD (BW00-068¹)

Ainsworth Army Airfield was constructed between August and November 1942 on a broad plain 7 miles west of Ainsworth, Brown County, Nebraska, in the north central part of the state. The 2,403 acre site is bordered by farm land on the west and north, Sand Draw on the east, and Highway 20 on the south.

A total of sixty four buildings were constructed at Ainsworth Army Airfield during WWII. To construct the base, once land was acquired through condemnation and purchase from seven local landowners, laborers were hired from as far away as Omaha and Sioux City. Two hundred Native Americans from the Pine Ridge Reservation in South Dakota came to Ainsworth and were put on the payroll as laborers as well. Before the construction was completed, a total of 1,200 workers came to build the Airfield. By November of 1942, the laborers had completed all housing at the base, and a railroad spur was built from the existing Chicago Northwestern railroad several miles to the south. These tracks brought most of the supplies for the base, including building materials, food, and coal (McBride, March 1989).

Once the facility was completed, it became a satellite field for the Rapid City Army Airfield at Rapid City, South Dakota. The primary objective of this facility was to train air crews of 540th and 543rd Bombardment Squadrons of the 383rd Bombardment Group based out of Rapid City Army Airfield for training with Boeing B-17 aircraft before being sent to the European Theater. The 540th and 543rd remained at Ainsworth between December 1942 to April 1943. Bomber crews practiced bombing runs over the wildlife refuge in Cherry County², the next county to the west. Later during the war, the 364th Fighter Squadron of the 357th Fighter Group out of Casper (WY) Army Airfield trained with Bell P-39 aircraft at Ainsworth from October to November 1943. The 53rd Fighter Squadron of the 37th Fighter Group out of Scribner (NE) Army Airfield trained with Republic P-47 aircraft at Ainsworth between November 1943 to March 1944. Aircraft camouflage experiments were also conducted at the field. When the facility was fully manned, there were a total of 544 enlisted men and 112 officers who lived on the base. Married personnel lived in Long Pine, Ainsworth and Johnstown (McBride, March 1989).

In 1946, a year after the end of WWII, the U. S. Corps of Engineers issued a Revokable License to the City of Ainsworth for commercial aircraft operations at the Airfield. Ainsworth AAF was declared surplus property in 1948, and the City of Ainsworth received title to the Airfield for use

¹ This designation is a Nebraska Historic Building Survey (NeHBS) property identification number.

² Though the source is not specific, this is likely the Valentine Wildlife Refuge.

as a municipal airport. Following the withdrawal of the military personnel, the base was closed down except for civilians who manned the Fire Department and the Weather Squadron. By late 1948, the field was used for charter flights, aircraft rental, flight lessons and a maintenance shop. In the mid 1980s the National Scientific Balloon Facility rented space at Ainsworth for periodic balloon missions. By the late 1980s, the Ainsworth Airport discontinued these services due to the depressed local economy. Currently the Ainsworth Municipal Airport, owned by the city of Ainsworth, is overseen by the Airport Authority, which provides basic services, with an airport manager who oversees airport activities such as fuel sales, hangar rental, tie-downs, weather station operation, aircraft communications and flight plan design. Approximately 1,300 acres of farm land and pasture is rented out to area farmers (McBride, March 1989).

A reconnaissance field survey was completed on 20 March 1991 by Tom Buecker and Robert Hurst for the Nebraska State Historical Society. At that time, surveyed properties included six buildings:

- Hangar (36³)
- Warehouse (37)
- Oil Storage (54)
- Bomb Trainer (57)
- Photo Bldg. (65)
- Incinerator

Though a bombsight storage building (extant in January 2000) was certainly there during the 1991 survey, it was not inventoried. This was likely an oversight.

There was also an extant water reservoir, aircraft taxi ways, hardstands, aprons, runways and roads.

In January 2000, Barbara Kooiman of Mississippi Valley Archaeology Center field re-surveyed the former Airfield. At that date there were four (4) buildings remaining, including:

- Bombsight Storage
- Hangar (36)
- Warehouse (37)
- Bomb Trainer (57)

Of the buildings listed above, only the Bombsight Storage building is potentially eligible for the National Register of Historic Places. It is a one story reinforced concrete storage building with two small storage compartments, each accessed by a thick, vault-like metal door. The Bombsight

³ The numbers in parentheses after each listed property is a U.S. Army building designator number, taken from the original Army airfield layout plans. They are listed here as a reference back to those drawings, which are located in each site file at the NeSHPO at the Nebraska State Historical Society in Lincoln, Nebraska.

Storage building was designed to securely store the highly secret Norden Bombsight. Invented by Carl Norden, the Norden Bombsight was a mechanical analog computer made up of gyros, motors, gears, mirrors and a telescope. It was used to determine the exact moment bombs had to be dropped to hit the target accurately. During the war, great precautions were taken to guard the secrecy of the Norden bombsight. The sight was loaded onto its aircraft just before takeoff under armed guard. It was covered from view until in the air. Upon landing, it was immediately removed, again under armed guard, and secured in the Norden Bombsight storage building under lock and guard. By the end of the war, over 45,000 bombardiers had been trained in its operation, each swearing under oath to protect its secrecy. It was considered one of the tools that enabled American bomber crews to cripple the Nazis and the Japanese.

Most of the WWII era buildings remaining at Ainsworth had been altered with newer metal siding, except the bombsight storage building which is in original condition with its concrete construction and metal doors. The oil storage had been demolished circa 1995, the photo building had collapsed circa 1992, and the incinerator had collapsed and was demolished circa 1994. The remaining water reservoir has been filled with soil, but is extant. Taxi ways, hardstands and aprons are partially extant. Portions of the taxi ways and aprons have been broken up and removed, whereas other portions have been repaved. Runways are partial, as some have been removed or shortened.

ALLIANCE ARMY AIRFIELD (BX00-014)

On April 14, 1942, the Secretary of War authorized the establishment of the Alliance Army Air base. Alliance Army Airfield was constructed between the summer of 1942 and August 1943 on a dry lake bed 3 miles southeast of Alliance, Box Butte County, in the center of Nebraska's Panhandle. The 4,205 acre site is bordered by low rolling sandhills to the east, and a wide plain on the north, west and south. Snake Creek flows through the southern section of the property.

During the construction of the base, workers flooded into the city of 6,669 people, and taxed the housing stock. Over 5,000 workers came from all over the country, and moved into garages, store rooms, cellars, attics, and even their own trailers in established parks. Many of the workers were Sioux Indians from the Pine Ridge and Rosebud Reservations, Mexicans from the Southwest, and blacks from Wichita and Kansas City (Larsen 1989: 240-1).

On August 22, 1943, a huge crowd of 65,000 Panhandle residents gathered for the dedication of the newly constructed Alliance Army Air Base. The cantonment housing area of the base covered 1,088 acres, and supported 775 buildings, including hangars, chapels, warehouses, barracks, mess halls, service buildings, and latrines. In addition, the base utilized a railroad spur, power plant, waterworks, and sewage system, as well as a total of 35,503 linear feet of runways. The base had been planned as a training facility for paratroops and air commandos, which needed

long runways for C-47s to tow gliders (Larsen, 1989: 241).

Alliance Army Airfield's mission was to provide a training facility for WWII Army paratroops and air crews. The Airfield was divided into air operations, quartermaster, troop cantonment, and gunnery ranges. Between the opening of the base and the spring of 1944, Troop Carrier Command ran the base, with as many as 14,000 paratroops in the area, using C-47 (powered troop carriers), and CG-3/CG-4 (glider troop carriers) for their training aircraft. The sandhills were thought to provide a softer landing than wooded areas for jumping paratroops. After the paratroops left Alliance, the Second Air Force temporarily used the Alliance base in the fall of 1944 for the training of B-29 crews. Training included showing the paratroopers how to jump, and teaching the B-29 air crews how to drop bombs and read navigational, aeronautical and bombsight equipment. Finally, in the summer of 1945, the Troop Carrier Command returned to the base to train for the proposed invasion of Japan. That necessity ended when Japan surrendered on September 6 (Larsen, 1989: 241-3).

As paratroopers flooded into Alliance, housing was at a critical shortage. In order to relieve the housing stress, a federal housing project was constructed at the east end of town, consisting of apartment complexes with plain stucco walls, coal heating stoves, and rows of chimneys along the rooflines, thus inspiring the name "Chimney Town." (*City of Alliance*, 1988: 28).

On October 31, 1945, the Army "temporarily" deactivated the Alliance Army Air Base. Though speculation was that the Army would make the huge Alliance Base a permanent installation, by November 20 the Troop Carrier Command closed the base permanently and began to make plans to sell the surplus property. By December 1945 the base was declared surplus property. Nonetheless, the base's status remained in limbo. The city of Alliance showed interest in acquiring the facility. However, in the fall of 1946 Nebraska congressman A. L. Miller stated that the base would be withdrawn from the surplus list to be reactivated for Troop Carrier Command training, in response to strained relations with the Soviet Union. This did not happen, however, and the U. S. Government negotiated a disposition agreement for the base. Due to disputes between the U.S. government and the city of Alliance, the final disposition of the base did not occur for many years, and in the meantime, the government removed the railroad tracks and auctioned off 240 buildings, including lavatories, guard houses and barracks. Finally, on July 16, 1953, the city of Alliance and the federal government finalized the base transfer for the land and buildings which were to become the Alliance Municipal Airport (Larsen, 1989: 243-253).

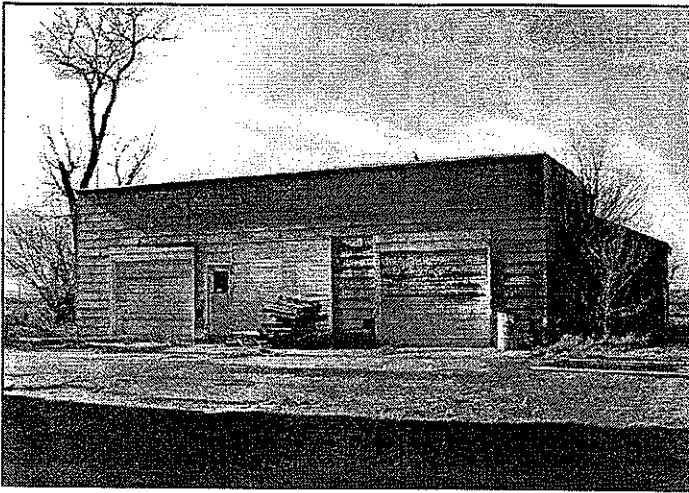
During WWII, 775 buildings and structures were constructed on the site. In December 1990 Tom Buecker and Robert Hurst conducted a reconnaissance field survey of extant buildings and structures at the former Alliance Army Air Base. They inventoried a total of twenty-nine buildings, as well as taxi ways, aircraft aprons, gunnery ranges, roads, building foundations,

piers, chimneys and concrete floors. Extant facilities were as follows:

Firing Range Magazine
Sewage Pump Station
Well House #1
Incinerator (0005)
S.A.AM.Storage (0008)
Seg. Storage Magazine (0010)
Fire Station (0304)
Elevated Water Tower (2002)
Operations (2302)
Boiler House (2310)
Radio Transmitter (2340)
Night Lighting Vault (2341)
Quartermaster Office (2901)
Motor Repair Shop (2904)
Motor Repair Shop (2905)
Motor Repair Shop (2906)
Storage Building (2909)
AC Warehouse (3000)
AAF Warehouse (3001)
AAF Warehouse (3004)
QM Warehouse (3006)
Base Engineering Shop (3101)
Post Engineer Warehouse (3201)
Post Engineer Warehouse (3209)
P.E. Engineer Branch (3212)
Operations & Laboratory (3217)
Machine Shop (3218)
Heavy Equipment Shed (3219)
Snow Equipment Igloo (3408)

In March 2000 Barbara Kooiman of MVAC re-surveyed the site, and found that nearly all of the above-listed properties were intact, except five. The five properties no longer extant are:

Firing Range Magazine
Sewage pump station
S.A.AM. Storage (0008)
Radio Transmitter (2340)
Quartermaster Office (2901)



BUILDING #0304, FIRE STATION, ALLIANCE ARMY AIRFIELD, APRIL 2000

Of the extant buildings, the only property which is considered to be potentially eligible for the National Register of Historic Places is the Fire Station, building #0304. It is a one story, T-shaped plan, wood frame building. The front portion, facing east, has double side-hinged doors, which open to store fire fighting equipment inside. It has a shallow-pitched gable roof. The walls are constructed of horizontal boards covered with tar paper siding. The rear section which extends from the west end of the fire fighting equipment storage section features a

gabled roof extension lined with windows. The interior houses offices, dormitory rooms and a small kitchen area for the fire fighters who stayed in the building during their duty. The building retains a high level of physical integrity. Its critical use as a fire station for this major Army Airfield was important to the mission of safely training pilots and maintaining aviation craft and equipment.

BRUNING ARMY AIRFIELD (TY-00-091)

The Bruning Army Airfield was constructed in 1942 seven miles east of Bruning, Thayer County, Nebraska. The 1,720 acre site is bordered on the west by low hills and a small creek bed. Level farm ground is on the north, east and south boundaries.

On September 12, 1942, twelve land owners received notice from the federal government that they had ten days to move off their farms, including livestock, farm equipment, feed and all possessions, leaving crops in the fields. They were compensated approximately \$50 an acre. Some of the vacated farm buildings and houses were moved, while others were demolished. Immediately thereafter, construction began on the Bruning Army Airfield, with the erection of 234 buildings and structures. A public dedication was given for the base on August 28, 1943. At its peak, the air base stationed 4,000 military personnel and 800 civilian employees (*Bruning Centennial History Book*, 1887 - 1987, 1987: 166-7).

Bruning Army Airfield was a major WWII training center for bomber crews and fighter pilots. Twelve bombardment squadrons and nine fighter squadrons completed proficiency training at the field before receiving orders for overseas combat assignments. Complete engine and airframe repairs were available for the B-24 bombers and P-47 fighters attached to Bruning AAF. Crews

that used the Bruning facility were:

DATES	GROUP	SQUADRONS
July to September 1943	456th Bombardment Group	744th, 745th, 746th and 747th Squadrons
September to December 1943	449th Bombardment Group	716th, 717th, 718th and 179th Squadrons
September to December 1943	487 Bombardment Group	836th, 837th, 838th and 839th Squadrons
October to December 1944	507th Fighter Group	463rd, 464th, and 465th Squadrons
November to December 1944	508th Fighter Group	466th, 467th, and 468th Squadrons
March to April 1944	(no group listed)	516th and 517th Fighter Squadrons
December 1943 to March 1944	(no group listed)	23rd Fighter Squadron

In 1947, 174 buildings were dismantled at Bruning. On January 15, 1948, Nebraska Department of Aeronautics acquired a quitclaim deed for Bruning Army Airfield from the U. S. War Assets Administration. The Nebraska Department of Aeronautics eventually took over a total of six former Army airfields after the war, and continued to operate nearly all of them for many years as state operated civilian airports. The Bruning field was operated as a State airfield until August 1969. The property is now closed to traffic and is leased to local farmers and a cattle feedlot company (*Bruning Centennial History Book*, 1987).

During WWII, 234 buildings and structures were constructed at Bruning Army Airfield. In April 1991 Greg Miller and Robert Hurst conducted a reconnaissance field survey of extant buildings at Bruning Army Airfield, and found that there were seven extant buildings and one structure, as well as runways, taxi ways, hardstands, aprons and roads. There were also remnants of foundations and floors found at the site. Extant facilities were as follows:

Water Tower

Hangar, H.B. Sub-Dep. (52)

Hangar, Sq. (53)

Bomb Site Storage (58)

Link Trainer Bldg (74)
Bomb Storage Revet. (103)
Oil Storage (106, 1 of 2)
Oil Storage (106, 2 of 2)

In March 2000, Barbara Kooiman of Mississippi Valley Archaeology Center conducted a re-survey of the former Bruning Army Airfield. Two of the buildings identified in 1991 were not extant, including the Link Training Building, and one of the Oil Storage buildings. The integrity of Hangar 52 is fairly intact, but Hangar 53 is in very poor condition, near ruins.

FAIRMONT ARMY AIRFIELD (FM00-028)

Fairmont Army Airfield was constructed in 1942 three miles south of Fairmont, Fillmore County, Nebraska. The 1,844 acre site is bordered by Indian Creek on the north, Highway 81 on the west, and farm ground on the east and south.

Construction began in September 1942, and shortly thereafter a railroad spur was built from Fairmont to the base site to haul materials for the construction. Approximately 1,000 laborers were hired to construct the base, and the small towns of Geneva (pop. 1,888) and Fairmont (pop. 800) were hard pressed to find housing for the workers. Early in the construction, the facility was referred to as the Fairmont Satellite Airfield, and was designated a satellite of the Topeka Army Air Base in Kansas, however by early 1943, the name was changed to the Fairmont Army Airfield, as its mission was determined to be a training facility for heavy bomber groups. The first military personnel arrived in November 1942 (*Friends Bulletin*, Vol. 12, No. 1, Spring 1989).

Fairmont Army Airfield was a major WWII training installation for twenty-seven bombardment squadrons of the 2nd Air Force. Complete engine and airframe repairs were available for B-24 and B-29 bombers at the five hangars on the field. A 350 bed hospital served personnel from Fairmont AAF, Harvard AAF and Bruning AAF. The cantonment area provided quarters for 3,700 officers and enlisted men.

The groups that trained at Fairmont included:

DATES	GROUP	SQUADRONS
September 1943 to March 1944	485th Bombardment Group	828th, 829th, 830th and 831st Squadrons

September to November 1943	451st Bombardment Group	724th, 725th, 726th and 727th Squadrons
March to November 1944	504th Bombardment Group	393rd, 398th, 421st and 507th Squadrons
August 1944 to March 1945	16th Bombardment Group	15th, 16th and 17th Squadrons
May to June 1945	98th Bombardment Group	343rd, 344th, 345th, and 415th Squadrons
July to August 1945	467th Bombardment Group	788th, 789th, 790th and 791st Squadrons
July to August 1945	489th Bombardment Group	844th, 845th, 846th and 847th Squadrons

It was from the 383rd Squadron of the 504th Bombardment Group that Lt. Col. Paul Tibbets selected his crew for the Enola Gay, which dropped the atomic bomb on Hiroshima (*Omaha World Herald*, 9 November 1999).

In the spring of 1946, the Fairmont field was declared surplus, and buildings were sold and dismantled or moved. The chapel was moved to Friend, Nebraska. The Enlisted Men's Service Club was dismantled and rebuilt in Shickley, Nebraska as St. Mary's Church. In 1946 Nebraska Department of Aeronautics acquired the Airfield from the U.S. Government for use as a state-owned civilian airport. Part of the property is leased to private parties for grain storage, farming and auto salvage (*Friends Bulletin*, Vol 12, No. 1, Spring 1989, 46-7).

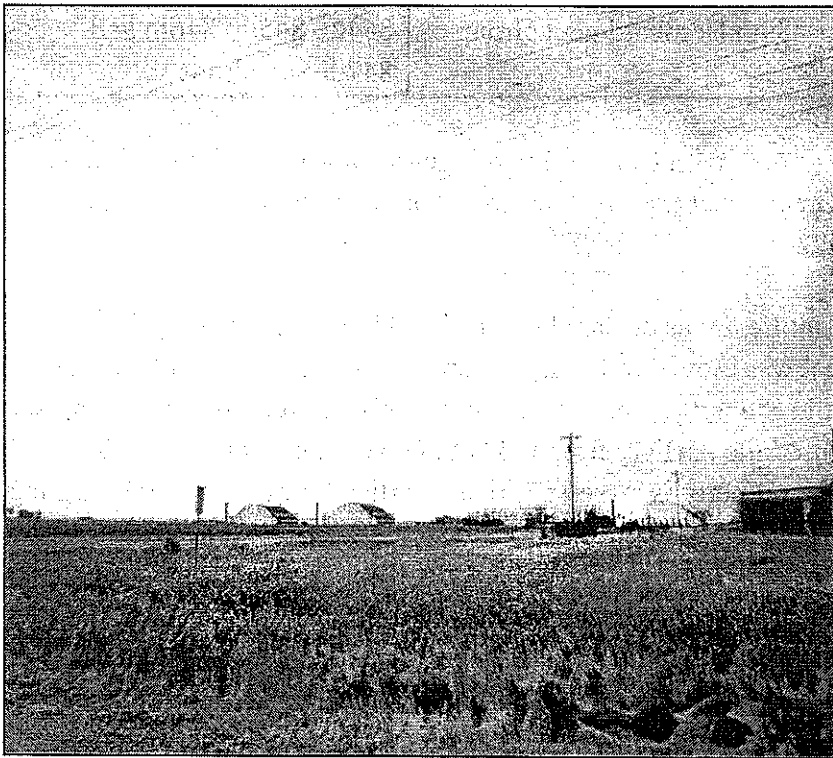
During WWII, 275 buildings and structures were constructed at Fairmont Army Airfield. In April 1991 Greg Miller and Robert Hurst conducted a reconnaissance field survey of extant buildings for the Nebraska State Historical Society. They found fifteen extant buildings, as well runways, taxi ways, hardstands, aprons and roads, as well as foundations and concrete floors. Extant facilities were as follows:

- Water Storage Tank (416)
- Oil Storage House (516)
- Hangar Squadron (901)
- Oil Storage House (905)
- Hangar Squadron (1401)
- Oil Storage House (1405)
- Hangar Maintenance (1503)

Hangar Squadron (1504)
Bombsight Storage (1601)
Paint & Dope Storage (1701)
Motor Vehicle Repair Shop (1801)
Motor Vehicle Repair Shop (1803)
Warehouse (2004)
House (5000)
Garage (5001)

In March 2000, Barbara Kooiman of Mississippi Valley Archeology Center conducted a re-survey of the base, and determined that only three of the fifteen properties were not extant at that time, including the Latrine (416), Motor Vehicle Repair Shop (1803) and Paint and Dope Storage

(1701). The remaining buildings were all in good or excellent shape except for the highly deteriorated Motor Vehicle Repair Shop (1801).



FAIRMONT ARMY AIRFIELD, APRIL 2000

The Fairmont Army Airfield, with its well maintained hangars, support buildings, and commander's house, was the best remaining example, as a collection of buildings, of the Army Airfields in the State of Nebraska. Due to the rural location, unencumbered by surrounding development, and the high level of physical integrity of the remaining buildings, particularly the hangars, the Fairmont Army

Airfield is potentially eligible for the National Register of Historic Places as an historic district.

The suggested approximate boundaries of the proposed National Register historic district would include the hardstands, aprons and existing runways on the west side, all of the historic buildings listed above, extending to the edges of the roads where extant buildings exist. This will encompass historic landscape features such as roads and WWII era planted trees.

FORT CROOK ARMY AIRFIELD/OFFUTT FIELD

Fort Crook, a U.S. Army fort, was constructed between 1894 and 1896, some 10 miles south of Omaha and two miles west of the Missouri River. The fort's namesake was Maj. Gen. George Crook, a renowned Indian fighter and Civil War hero who commanded the forces that Apache War Chief Geronimo surrendered to in 1896. Many of the original buildings constructed on the post before 1900, including the guard house and various enlisted and officers quarters, are still in use today.

The 61st Balloon Company became the first air unit to command the post on Sept. 10, 1918. In the spring of 1921, the plowing, leveling, and seeding of 260 acres of land at Fort Crook created an airfield suitable for frequent takeoffs and landings and a refueling point for military and government aircraft on cross-country flights.

The airfield portion of Fort Crook was designated Offutt Field on May 10, 1924, in honor of 1st Lt. Jarvis J. Offutt, who was killed while flying with the Royal Air Force in France and was Omaha's first World War I air casualty.

Years later as American involvement in World War II loomed, the Army Air Corps chose Fort Crook in 1941 as the site for a new bomber plant. The plant's construction included two mile-long concrete runways, six large hangars, and a huge 1.2 million square-foot aircraft-assembly building.

The Glenn L. Martin Company began producing bombers in January 1942, with the plant reaching full-scale production June 8, 1942. A total of 531 B-29 Superfortresses and 1,585 B-26 Marauders were built at the Martin-Nebraska bomber plant before the end of World War II. These aircraft included the *Enola Gay* and *Bock's Car*, the two B-29s that dropped atomic bombs on Hiroshima and Nagasaki, Japan. Production ended on Sept. 18, 1945, when the last B-29 rolled out of the assembly building.

In June 1946, the Army Air Force re-designated Fort Crook and the Martin-Nebraska facilities as Offutt Field. Just eighteen months later, on 13 January 1948, Offutt Field transferred to the new Department of the Air Force and became Offutt Air Force Base. Later that same year, on Sept. 26, the 3902nd Air Base Wing became the host unit at Offutt.

At one minute past midnight, 9 November 1948, Offutt gained international prominence when it became the host base for Headquarters Strategic Air Command. Air Force Secretary Stuart Symington chose to locate the Air Force's crucial long-range atomic strike force at Offutt primarily because the base was centrally located on the North American continent, placing it well beyond the existing range of potentially hostile bombers or missiles.

The old frontier fort underwent startling changes in the Cold War years that followed. Operations at Offutt included the basing of alert bombers and tankers in the late 1950s and 1960s, support for intercontinental ballistic missile sites in Nebraska and Iowa in the 1960s, and worldwide reconnaissance from the mid-1960s to the present.

The establishment of the Joint Strategic Target Planning Staff in 1960, the Looking Glass airborne command post in 1961, the activation of Air Force Global Weather Central in 1969, and the arrival of the National Emergency Airborne Command Post mission in 1977 further enhanced Offutt's role as a center of military importance.

Offutt's population and facilities grew dramatically to keep pace with the increased operational demands. Several new dormitories and more than 2,000 family housing units - built in the late 1950s and 1960s under incremental Wherry and Capehart projects - quickly replaced the old quarters of Fort Crook.

Headquarters SAC moved from the Martin-Nebraska complex to Building 500 in 1957, and new base facilities in the 1960s and 1970s included a hospital, main exchange, commissary, and library (<http://www.offutt.af.mil/geninfo/history>).

Re-survey of Fort Crook/Offutt Field was not done for this project in 2000, because a comprehensive historic building survey was completed in 1993-95 as part of a Legacy Program/National Park Service contract between the Nebraska SHPO and Offutt Air Force Base.

GRAND ISLAND ARMY AIRFIELD (HLOO-041)

Grand Island Army Airfield was constructed in 1942 three miles northeast of Grand Island, Hall County, Nebraska. A portion of the 2,125 acre site was a former national defense airport. The site is bordered on all sides by farm ground. The Army Airfield was constructed, in part, over the pre-existing Grand Island Arrasmith Airport.

Grand Island Army Airfield was used in the early part of WWII to train bomber air crews. Later in the war, the field was a staging area for bomber crews preparing for assignments in Guam and Tinian in the Pacific Theater of Operations. Major engine and airframe repair facilities were available for B-17 and B-29 bombers. One bombardment training wing (2nd AF), and three bombardment groups (20th AF) were attached to Grand Island during the war.

Crews that used the Grand Island Army Airfield during WWII were as follows:

DATES	GROUP	SQUADRONS	AIRCRAFT FLOWN
May to November 1944	6th Bombardment Group	24th, 39th and 40th Squadrons	B-29 aircraft
September 1944 to April 1945	502nd Bombardment Group	402nd, 411th, and 430th Squadrons	B-29 aircraft
June to November 1945	376th Bombardment Group	512th, 513th, 514th, and 515th	B-29 aircraft

Shortly after the war, the City of Grand Island acquired the Airfield from the federal government for use as a municipal airport and industrial park.

173 buildings and structures were constructed at Grand Island Army Airfield during WWII. In April 1991 Robert Hurst conducted a field reconnaissance inventory of the base for the Nebraska State Historical Society. At that time, he determined the following fourteen buildings as extant, as well as runways, taxi ways, hardstands, aircraft aprons, and roads, as well as concrete floors:

Hangar (pre-war construction, #2)

Hangar (T113)

Hangar (T115)

Hangar (T131)

Civilian Mess (T133)

Paint and Dope Storage (T802)

Parachute Building (T803)

Equipment Shed (T824)

Warehouse QM (T850)

Warehouse (T851)

Warehouse QM (T852)

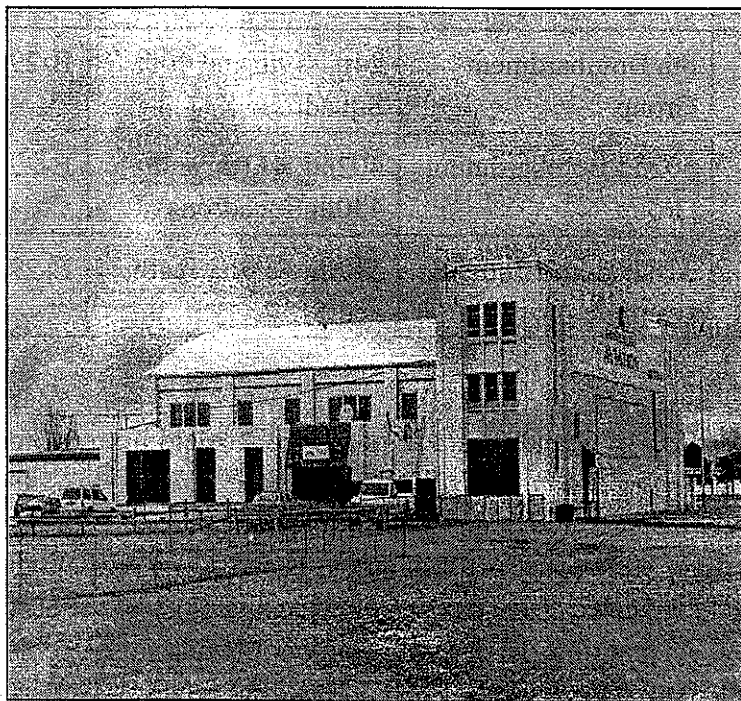
Warehouse (T853)

Warehouse QM (T854)

Warehouse (T855)

In March 2000, Barbara Kooiman of Mississippi Valley Archeology Center conducted a re-survey of the base, and determined that only two of the fourteen were not extant at that time, including Hangar T131 and Equipment Shed T824. Most of the warehouses were being used for commercial storage, and Hangar #2 was surrounded by modern development used in support of the airport's current use as a municipal aviation facility. Though not definitively confirmed, it

appears that Hangar #2 may have been built as part of Grand Island's role as a National Defense airport.



HANGAR #2, GRAND ISLAND ARMY AIRFIELD, APRIL 2000

HARVARD ARMY AIRFIELD (CY00-123)

Harvard Army Airfield was constructed in 1942 three miles northeast of Harvard, Clay County, in southeast Nebraska. The site is located in a farming area, and consists of 1,704 acres.

Harvard Army Airfield was a major WWII training center for bomber crews of the 2nd Air Force. Complete engine and air-frame repairs were available for B-17, B-24 and B-29 bombers at the five hangars on the field. Between August 1943 and December 1945, twenty six bombardment squadrons received proficiency training at Harvard AAF.

On 2 September 1942, an announcement was made to the community of Harvard that a satellite Army Airfield would be located just northeast of Harvard. By September 17 construction began, farmers were removed from their properties, and by November 19, the work was nearly completed. The Army brought in the first military personnel in December 1942. Opened originally as a satellite base for Kearney, Nebraska AAF, approximately 48 nautical miles away, Harvard was soon scheduled for full time operation. Even after the surrender of the Japanese in September 1945, the Harvard base remained active for a period, until the base was finally declared surplus property on 21 May 1946. Most of the buildings were dismantled and moved or sold for lumber, and the remaining facility was turned over to the State of Nebraska. Since that

time, surrounding farmers have leased the land from the Department of Aeronautics for agricultural purposes, and the hangars are used for grain storage. In 1983, three of the hangars were destroyed by fire, which was started by careless use of a cutting torch by a pair of teenagers who were dismantling the first hangar for salvage (*Harvard, NE, 100 Years + 2*, 1973: 107-110; *Omaha World-Herald*, 26 April 1983).

The bombardment crews that trained at Harvard are as follows:

DATE	GROUP	SQUADRONS	AIRCRAFT FLOWN
August to November 1943	447th Bombardment Group	708th, 709th, 710th and 711th Squadrons	B-17 aircraft
September 1943 to March 1944	484th Bombardment Group	824th, 825th, 826th and 827th Squadrons	B-24 aircraft
April to November 1944	505th Bombardment Group	482nd, 483rd and 484th Squadrons	B-29 aircraft
August 1944 to March 1945	501st Bombardment Group	21st, 41st and 485th Squadrons	B-29 aircraft
May to June 1945	376th Bombardment Group, as the former 15th Air Force group	512th, 513th, 514th, and 515th Squadrons	retraining with B-29 aircraft
July to October 1945	450th Bombardment Group, as the former 15th Air Force group	720th, 721st, 722nd, and 723rd Squadrons	retraining with B-29 aircraft
September to December 1945	467th Bombardment Group, as the former 8th Air Force group	Squadrons 788th, 789th, 790th and 791 st Squadrons	retraining with B-29 aircraft

During WWII, 277 buildings and structures were constructed at Harvard Army Airfield. In April 1991 Robert Hurst conducted a reconnaissance field survey of extant structures at Harvard for the Nebraska State Historical Society. He inventoried nine extant properties, as well as partial runways, aircraft taxi ways, aircraft aprons, roads, WWII era foundations, chimneys and concrete floors at the site. The extant properties were as follows:

Water Tower (108)

Bomb Sight Storage (502)

Squadron Hangar (506, back of hangar only)

Squadron Hangar (514)
Transformer Vault (518)
Link Trainer (806)
NCO Club (1113)
Acetylene Storage Shed (1118)
Motor Pool Machine Shop (1202)

In March 2000, Barbara Kooiman of Mississippi Valley Archaeology Center conducted a re-survey of the extant properties at Harvard. Of the nine properties at Harvard in 1991, two were not extant. They were as follows:

Squadron Hangar (506)
Acetylene Storage Shed (1118)

The Link Trainer Building and NCO Club have both been altered with modern metal siding.

KEARNEY ARMY AIRFIELD (BF00-078)

Kearney Army Airfield was constructed in late 1942 four miles east of Kearney, Buffalo County, Nebraska. The 2,784 acre site absorbed a national defense airport that was completed in the summer of 1942. The field is bordered on the north by Wood River, the south by Highway 30, and on the east and west by level farm ground.

Kearney Army Airfield was a major WWII training and processing center for bomber air crews. The primary mission of the base was to provide a staging area for bombardment groups before deployment to overseas combat zones. Air crews were "checked out" for flying proficiency, and aircraft were prepared for future combat assignments.

In 1940, Kearney had a population of 9,643 people. In the early 1940s, three Nebraska cities, Kearney, Grand Island, and Hastings, joined together to form the Central Nebraska Defense Council. The group attempted to convince Washington that central Nebraska was a suitable location for defense related activities. Kearney and Grand Island effectively competed with one another as locations for defense airports which would serve as storage for aircraft being produced at Offutt Field and the Glenn L. Martin Bomber Plant near Omaha. As early as 1941 the City of Kearney voted on a \$60,000 bond to finance a new airport. The total cost ended up being more than \$360,000, with the balance funded by the Works Progress Administration (WPA). Construction began at the site five miles east of Kearney on Highway 30 on October 21, 1941, and was dedicated as Keens Airport on 23 August 1942, with asphalt runways and a single hangar (Petersen, 1991: 119).

Shortly after the dedication of Keens Airport at Kearney, rumors spread that an army airfield may be located at Kearney. By September 1942, the rumors appeared true, and the Army Corps of Engineers inspected the new airport, only to decide that it was inadequate for the kind of use it would receive. In October 1942, approximately 1,000 laborers were brought in to build a new airfield adjacent to the Keens Airport. When completed, as many as 139 B-29s could be parked along the taxi-ways of the new army airfield. Six large hangars were constructed, including the steel hangar at the extreme south end of the airfield which was completed in July 1944 to hold two B-17s. Construction proceeded at a frantic pace. For example, construction began on the first of several mess halls on October 7. By October 12, meals were being served to 400 men in this new building. Housing was constructed to accommodate 542 officers, 3,230 enlisted men and 132 WACs (Womens' Air Corps). Construction was officially complete by 1 February 1943 (Petersen, 1991: 120).

After the war, Kearney AAF base remained active for a while, however only in small numbers, with only 219 servicemen at the base in March 1946. By December 1946, it was announced that fifty-two additional housing units were to be constructed at KAAF, which was the first evidence that the base would remain open. On July 23, 1947, a group of men came to Kearney to set up what would become the 27th Fighter Wing. They used the P-51, and later the F-82 long range fighters, with the 27th's mission to escort B-29 bombers equipped with atomic weapons for potential attacks on the Soviet Union. Nonetheless, the base was finally closed in March 1949, and the 27th was transferred to Bergstrom Air Force Base in Austin, Texas. Many locals in Kearney felt the transfer was decided because of the shortage of housing in Kearney (Petersen, 1991: 125-6).

On 19 December 1949, the Kearney Army Airfield was turned over to the City of Kearney for use as a municipal airport. After acquisitions the city removed two of the three runways and some of the associated taxiways from service (*Kearney Municipal Airport, Kearney, Nebraska, Airport Layout Plan Narrative Report*, November 1994: 2).

During WWII, 485 buildings and structures were constructed at Kearney Army Airfield. In March 1991 Tom Buecker and Robert Hurst conducted a reconnaissance field survey of extant buildings at Kearney AAF for the Nebraska State Historical Society. They found thirty-six extant buildings, in addition to runways, taxi ways, aprons and roads, as well as WWII era foundations and concrete floors. These included:

- Steel Hangar (385)
- Warehouse AAF (417)
- Warehouse QM (418)
- Warehouse QM (419)
- Warehouse AAF (420)
- Carpenter Shop (422)

Carpenter Shop addn (422-1)
Lavatory (423)
Paint Shop (424)
Administration (425)
Toilet Add. (425-1)
Equipment Shop (426)
Equipment Shop Add. (426-1)
Blacksmith Shop(427)
Blacksmith Shop Add. (427-1)
Sheet Metal (428)
Electric Shop (429)
Electric & Plumbing (429-1)
Plumbing Shop (430)
Equipment Shed (432)
Oil Storage (443)
Dispatcher (444)
Commissary (445)
Warehouse QM (446)
Warehouse QM (447)
Gas Station (448)
Warehouse (482)
Warehouse (483)
Warehouse (485)
Coal Office (486)
Fire Station (650)
#1 Well Pump (651)
#2 Well Pump (653)
Reservoir Storage (654)
Hangar #4 (710)
Oil Storage (711)

In March 2000 Barbara Kooiman of Mississippi Valley conducted a re-survey of extant buildings at Kearney AAF, and of the thirty-six extant in 1991, only ten remained. The extant buildings included:

Steel Hangar (385)
Warehouse QM (419)
Warehouse AAF (420)
Carpenter Shop (422)
Carpenter Shop addn (422-1)
Equipment Shed (432)

Warehouse QM (482)
Warehouse QM (483)
#2 Well Pump (653)
Reservoir Storage



STEEL HANGAR, BUILDING #385, KEARNEY ARMY AIRFIELD, APRIL 2000

Of these ten, only the Steel Hangar stands on land that is currently owned by the City of Kearney, while all the remaining buildings are on privately owned property.

LINCOLN ARMY AIRFIELD (LC00-117, LC00-118)

The Lincoln Army Airfield was constructed in 1942 five miles northwest of Lincoln, Lancaster County, Nebraska. The site consisted of approximately 3,000 acres, and is bordered by low rolling hills. Oak Creek flows through the cantonment section of the installation providing natural drainage for the area.

During WWII Lincoln Army Airfield provided a training center for over 25,000 aircraft mechanics, a processing center for an additional 30,000 combat personnel, a basic training facility for Army aviation cadets, and a military separation center. Bombardment groups and fighter squadrons were also stationed at the field before deployment to overseas assignments.

On 21 March 1942 the Army Air Force Technical Training Command publicly announced its plans to construct an Army Air Base and Mechanic's School on the outskirts of Lincoln, Nebraska. The plan consolidated a number of technical schools that were scattered throughout the country at that time. The base was completed 151 days after the announcement the base was made complete with barracks, paved streets, hangars and shops, as well as the Army Air Forces Technical School. The first trainees came to the base by 2 June 1942. The base specialized in training of mechanics for the Army's fighter and pursuit type aircraft. Classrooms functioned 24 hours a day, seven days a week. The insignia that the Army Air Forces Technical Training

Command chose was a golden urn in which rests three plumes which symbolize the School's three branches -- mechanics, photography and communications (Lincoln Army Air Forces Technical School, 1943).

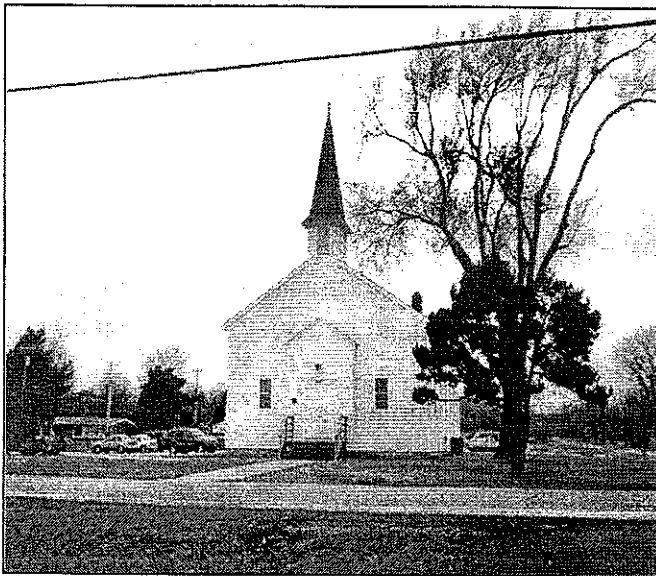
At the end of WWII Lincoln AAF was closed. In 1952 the base was reactivated with two bomb wings, an Atlas missile detachment and a refueling squadron. In the 1963 the City of Lincoln and Strategic Air Command who used facilities of Lincoln Air Force Base, reached an unprecedented cooperative agreement in which the two entities shared base facilities. Lincoln could then make expansion plans for their municipal airport. In 1966 Lincoln Air Force Base was permanently closed. Most of the original Airfield is now owned by the City of Lincoln, and is used for general, commercial, and military aviation, an industrial park and public and private housing (Engineering News Record, 1963).

During WWII, 1,016 buildings and structures were constructed at Lincoln Army Airfield. In May 1991 Robert Hurst completed a reconnaissance field survey of extant buildings at the former air base for the Nebraska State Historical Society. There were three extant buildings, as well as partial runways, aircraft taxi ways, aircraft aprons and roads. The extant buildings were as follows:

Warehouse (23)

Warehouse (24)

Chapel (1045)



CHAPEL, BUILDING #1045, LINCOLN ARMY AIRFIELD, APRIL 2000

In March 2000 Barbara Kooiman of Mississippi Valley Archaeology Center conducted a re-survey of extant buildings at the base. She found all three buildings that were extant in 1991 to still exist in 2000. The warehouses are on land owned by the Lincoln Airport Authority, and the chapel is located land owned by the Lincoln Housing Authority. The building remains on its original location, and is currently listed on the National Register of Historic Places.

McCook Army Airfield (RW00-001)

McCook Army Airfield was constructed in 1943 nine miles northwest of McCook, Red Willow County, Nebraska. The 2,100 acre site is bordered on all sides by level farm ground.

McCook Army Airfield was a major training base under the command of the 2nd Air Force. Crew members of B-17, B-24, and B-29 bombers received final proficiency training at the field before deployment in North Africa, Europe, and Pacific Theater of Operations.

DATE	GROUP	SQUADRON	AIRCRAFT FLOWN
September to November 1943	486th Bombardment Group	832nd, 833rd, 834th and 835th Squadrons	B-24 and B-17 aircraft
October 1943 to February 1944	465th Bombardment Group	780th, 781st, 782nd and 783rd Squadrons	B-24 aircraft
November 1943 to January 1944	493rd Bombardment Group	860th, 861st, 862nd and 863rd Squadrons	B-24 and B-17 aircraft
May to November 1944	9th Bombardment Group	1st, 5th, 99th and 430th Squadrons	B-29 aircraft
November 1944 to April 1945	331st Bombardment Group	355th, 356th, and 357th Squadrons	B-29 aircraft
June to November 1945	98th Bombardment Group, as the former 15th Air Force group	343rd, 344th, 345th and 415th Squadrons	re-trained with B-29 aircraft
September to December 1945	448th Bombardment Group, as the former 8th Air Force group	712th, 713th, 714th, and 715th Squadrons	re-trained with B-29 aircraft

The Airfield closed on 31 December 1945, and was acquired by the state of Nebraska from the War Assets Administration in 1947. In 1950, the city of McCook took possession of the airfield for a municipal airport, however, found that its distant location from the city made it inconvenient. The city of McCook turned the McCook airfield back to the State of Nebraska in 1952, and began plans for another municipal airport just northeast of the city. Portions of the property are now owned by a farmer, a local historian, and a local historical society.

Approximately 110 buildings and structures were constructed at McCook Army Airfield during WWII. In July 1991 Robert Hurst conducted a reconnaissance field survey of the site to determine extant buildings and structures. He identified thirteen extant buildings and structures, as well as partial runways, aircraft taxi ways, aircraft aprons, and roads, as well as WWII era foundations, chimneys and concrete floors. The extant properties included:

Hangar (16)

Bombsight Storage (28)

Elevated Water Tower (88)

Technical & Signal School (117)

Hangar (169)

Hangar (201)

Engine Cleaning (202)

Paint and Dope Storage (205)

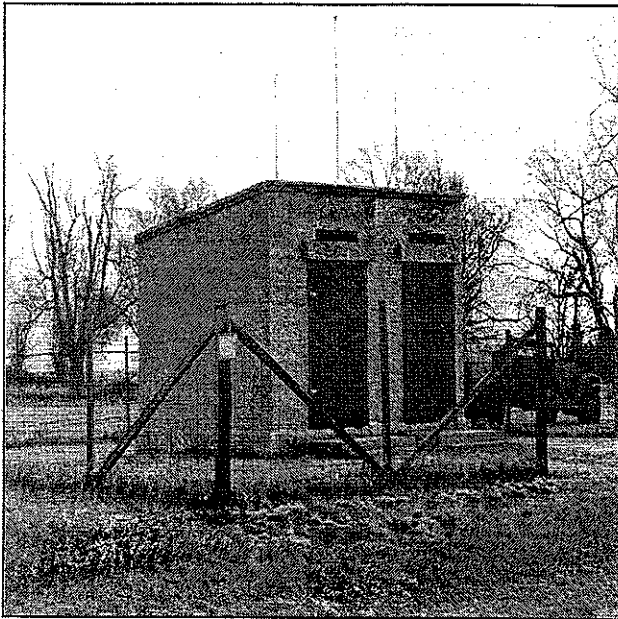
Bombsight Storage (207)

AAF Warehouse (209)

AAF Warehouse (318)

Hangar (602)

Hangar (629)



**NORDEN BOMBSIGHT STORAGE, BUILDING
#23, MCCOOK ARMY AIRFIELD, APRIL 2000**

Barbara Kooiman conducted a re-survey of McCook in April 2000. All buildings and structures were extant except the water tower. The water tower was demolished in 1997. Bombsight Storage Building #23 was listed on the National Register of Historic Places in 1993.

SCOTTSBLUFF ARMY AIRFIELD (SF00-048)

Scottsbluff Army Airfield was constructed in 1942 on a high plateau three miles east of Scottsbluff, Scotts Bluff County, Nebraska. The 1,755 acre site is bordered on all sides by irrigation canals and farm ground.

Scottsbluff actively promoted the use of its municipal airport for military/defense purposes, as was illustrated through a document they compiled in 1942 showing the U.S. government that Scottsbluff was well suited for national defense purposes. The airport, first established in 1934, had a hangar, commercial airline connections, air mail service, lighted fields, a weather bureau station, and a strong record as a civilian pilot training facility (*Scottsbluff, Nebr., Offers Ideal Location and Facilities for Aviation Training in National Defense*, 1942).

On 5 September 1942, an announcement was made that Scottsbluff was selected as one of seven satellite air bases that would be located in Nebraska. Twenty-eight farms were purchased and evacuated, and the original Scottsbluff Municipal Airport was forced to close to make way for the new airfield's construction. The old airport later became a prisoner of war camp. Construction began at the new base on 7 September 1942. A temporary railroad spur was constructed to the base, and concrete was rapidly poured for runways. The base was first occupied as early as 11 October 1942. Initially, Scottsbluff Army Airfield was a satellite to the Casper, Wyoming air base. The first troops arrived 4 December 1942 (Scotts Bluff County Airport, 1987).

Scottsbluff Army Airfield was part of a series of training bases built in Nebraska during World War II. The original mission of this installation was to train aircrews of B-17 and B-24 bombers of the 2nd Air Force. In 1944 base command was transferred from 2nd AF to the 1st Troop Carrier Command, and became a satellite field of Alliance Army Airfield. The 1st TCC used the facility for C-47 training flights and glider operations.

Shortly after WWII, in July 1947, the War Assets Administration sold the Airfield land and runways to Scottsbluff for use as a municipal airport. Buildings and structures which were not part of the transfer were sold by the U.S. Government in separate agreements, and in most cases were removed from the site. The military continued to use the airport for military training regularly until 1950. In July 1970, the city transferred ownership of the Airfield to Scotts Bluff County, which continues to operate the facility as the William B. Helig Field, serving the regional area of the Nebraska Panhandle for all public travel and aeronautical needs and is connected by commercial airlines.

During WWII, 108 buildings and structures were constructed at the airfield. In December 1990 Robert Hurst conducted a reconnaissance field survey of extant buildings and structures at Scottsbluff for the Nebraska State Historical Society. Six buildings were extant, as well as

runways, taxi ways, hardstands, aprons and roads. The extant properties were as follows:

Camouflage Instruction Building (T121)

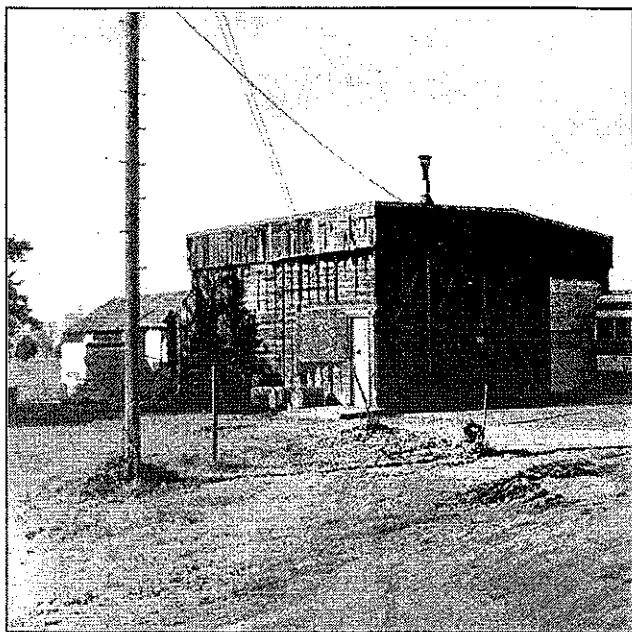
Transformer Vault (T321)

Well House (T322)

Fire Station (T323)

Black Powder Magazine (T505)

Equipment Storage (T609)



**FIRE STATION, BUILDING #T323,
SCOTTSBLUFF ARMY AIRFIELD, APRIL 2000**

In January 2000, Barbara Kooiman of Mississippi Valley Archaeology Center conducted a re-survey of the Scottsbluff site. She surveyed all six of the extant properties which existed in 1990. Of the six, the Fire Station (T323) is potentially eligible for the National Register of Historic Places.

SCRIBNER ARMY AIRFIELD (DD00-081)

Scribner Army Airfield was constructed in 1942 on a high plateau 3.5 miles southeast of Scribner, Dodge County, in east central Nebraska. The 2,060 acre site is located north of the Elkhorn River and is surrounded by low rolling hills on the east, south and west. Agriculture is the main industry of the area.

Scribner Army Airfield was an Air Corps training facility during WWII. B-17 and B-24 bomber air crews, and P-47 fighter pilots completed proficiency training here before reassignment to the European Theater of Operations. Airfield camouflage techniques were also being tested by the Army on aircraft runways and buildings at the Airfield.

Crews that used Scribner Army Airfield included the following:

DATE	GROUP	SQUADRON	AIRCRAFT FLOWN
November 1943 to March 1944	36th Fighter Group	22nd, 23rd, and 53rd Squadrons	P-47 aircraft
July to August 1943		583rd Bombardment Squadron	B-17 aircraft

The first official news that Scribner Air Base would be constructed came on 1 October 1942, with eviction notices given to area farmers shortly thereafter. Construction soon began, with two runways completed by 26 November 1942. The base was designated as a satellite base to the major base at Sioux City, Iowa, though by 1943 it became an independent base, with the Army Airfield at Ainsworth designated as Scribner's satellite. The base was officially opened on 9 December 1942 (Harsha, 1982).

The Air Base also became a camouflage school. By 1943 the entire base was camouflaged to look like a farm and small village to prove that an air base could be hidden from the enemy. The hangar was painted red to resemble a barn, chicken wire was stuffed with green colored spun glass to resemble trees, and a mock silo beside the barn really housed the sliding hangar doors. Another building was given a steeple and painted to resemble a church, and a "school house" was built with spun-glass children. Even the runways were coated with tar and coated with wood chips and ground corncobs, and painted green or brown, depending on the season.

The State of Nebraska acquired the Airfield property from the U.S. Government in 1946. By 1951, word came that the then surplus Scribner Air Base was being considered as the site of a proposed United States Air Force Academy. This did not happen, however, the U.S. Air Force acquired 136 acres for installation of an ionosphere sounding station. The remainder of the former Airfield was rented out. Nebraska Department of Aeronautics continues to operate the airfield, leasing storage and small segments of land to local concerns. A U.S. Air Force communications center is also located on the site. Scribner State Airfield currently has two active runways (Harsha, 1982).

During WWII, 87 buildings and structures were constructed at Scribner Army Airfield. In March 1991, Tom Buecker and Robert Hurst conducted a reconnaissance field survey of extant buildings and structures at Scribner for the Nebraska State Historical Society. They identified two extant buildings, as well as runways, taxi-ways, hardstands, aprons and roads. The extant buildings include:

Steel Quonset Storage Building
Equipment Storage Building

In April 2000, Barbara Kooiman from Mississippi Valley Archaeology Center visited Scribner and confirmed that the steel quonset shed is extant, however the equipment storage building is not extant. She also looked at remnants of the wood chip and corncob runway material, and a WWII era wood drainage culvert which spans under the property, from the runway to the road ditch.

REGISTRATION REQUIREMENTS

ASSOCIATED PROPERTY TYPES

The properties which may be eligible for the National Register of Historic Places within the context of United States Army Airfields in Nebraska during World War II fall under categories of function. There were a number of categories of buildings designated by function which were present at many of these Army Airfields. Appendix C, *Associated Property Types for Army Airfields in Nebraska*, illustrates what these categories were, what buildings would have fallen under each category, and how many of each of these types of buildings under each category were extant in the year 2000.

Generally, in terms of physical integrity for National Register eligibility, the individual buildings must maintain their original appearance, in their original location, with original siding material, windows, doors and foundation. Modern siding, covered windows, removed doors and windows, and severely deteriorated siding cannot be considered acceptable.

District potential, in terms of physical integrity, is more complicated, as the buildings were not constructed for long-term use. When they were demobilized, all of the former U.S. Army airfields were significantly altered. All were closed shortly after World War II, and were either turned over to the neighboring community or to the State of Nebraska. Prior to relinquishing the properties, the War Assets Administration sold buildings, demolished others, and in effect, completely altered the war-era appearance of virtually every field in Nebraska. Because of this situation, there are no pristine WWII era Army airfields in Nebraska, and physical integrity is compromised to a certain extent on every former airfield. However, due to their outstanding historical significance and their relative rarity, both on the state and local levels, integrity of location, setting, materials, workmanship, feeling, and association still may be considered. For example, even though many of the buildings are gone, an Army airfield may have sufficient integrity of setting, feeling and association. When someone visits these sites today, they may have a sense of the important historical events that took place there. The layout of the roads may be intact, the hangars, which were the focus of nearly all wartime training activities, and a sufficient number of ancillary buildings may still give a sense of a historical period of time.

In order for a building or structure to be individually eligible for the National Register of Historic Places, it must have held a function that was critical to the mission of the Airfield. The twelve Army Airfields in Nebraska were used for training and staging of pilots prior to sending them to further training or directly to theaters of war either in Europe or the Pacific. Thus, only buildings and structures which were directly used in those training missions should be considered potentially eligible, in terms of function. Ancillary and support buildings, where other non-

mission activities took place should not be considered potentially eligible.

An analysis of the remaining buildings/structures in each functional category will help illustrate the relative importance and rarity of certain property types remaining among Nebraska WWII U.S. Army Airfields.

ADMINISTRATION

Under the Administration category, which originally had nineteen possible property types, only buildings representing two types are extant. Of these two, neither the Coal Office nor the Operations Building are critical to understanding the historical operation and mission of a U.S. Army Airfield.

ARMAMENTS & MUNITIONS

In this category, out of sixteen possible property types, four buildings representing these types remain extant. Of these four (Black Powder Magazine, Bomb Storage Revetment, Bombsight Storage A, Bombsight Storage B) only the Bombsight Storage buildings are individually of historical importance to the mission of the army airfields. These concrete storage vaults were where the secret Norden Bombsights were placed when they were not in use either in the air, nor in bombsight training. The Norden Bombsight Storage building at McCook was listed on the National Register of Historic Places in 1993 under Criterion A as a Second Generation version of the bombsight storage designs. These bombsights were crucial to the success of the air war in Europe and Asia during World War II, and the bombsight storage buildings are an important relic of their function and importance remaining on these airfields.

BARRACKS AND MESS

Under this category, which originally had ten property types, only one property type has an extant building (Civilian Mess). This building, though the last remaining property type within its functional category, does not represent the total mission of the U.S. Army airfields, and functioned as a support building to the base.

COMMISSARY, CLUBS & RECREATION

Under this category, originally represented by seven property types, only one property type features an extant building (Non-Commissioned Officers Club). This property, like the Civilian Mess, though the last remaining property type in this category, does not represent the mission of the U.S. Army airfields.

FLIGHT SUPPORT - MISC.

This category, which featured twelve property types, has only two extant buildings remaining (Night Lighting Vault and Parachute Building). Though they are the last remaining property types in this category, neither building represents the mission of the Army airfields. The

Parachute Building, located at Grand Island, was no doubt an ancillary building, and not part of the main mission of the Grand Island airfield, which trained bombers, then later became a staging area for bomber troops who were preparing for their overseas missions.

HANGARS

This category, which featured six different sub-property types which are all hangars, is the best represented of all the categories, with fourteen extant hangars. The hangars are among the best remaining individual buildings which were critical to the historic function and significance of the airfields. In this category there is one National Defense hangar (Grand Island). This hangar, because of its historic significance as a hangar built during the national defense build-up of civilian airports prior to the construction of many of the U.S. Army airfields, and for its continued use once Grand Island became a U.S. Army airfield, is potentially eligible for the National Register of Historic Places. The remaining hangars, which were all constructed as part of Army airfield development, are potentially eligible for the National Register as properties which demonstrate the primary function of these airfields, which was to train and prepare pilots and support crews to go to Europe and Asia during the war, and contribute to the air war during World War II.

HEALTH FACILITIES

There are no extant properties remaining on the Army airfields which represent the four original property types in this category.

PHYSICAL PLANT

There were twenty-seven property types in this category, of which there are extant examples in fifteen of the twenty-seven. These include boiler house, carpenter shop, elevated water tower, fire station, incinerator, machine shop, motor pool shop, oil storage, paint & dope storage, pump house, transformer vault, water tank storage, water tower, and well house. Of these fifteen property types, only the two extant fire houses at Alliance and Scottsbluff represent the mission of the Army airfields. The fire houses were critical to the primary function of these fields. Due to the potential for aviation accidents, and the importance of rapid response to the accidents in the attempt to preserve the aircraft and lives, the fire stations were historically significant to the continued operation of the airfields.

STORAGE

There were twelve property types in this category, with six extant examples of the twelve remaining, including equipment shed, post engineering warehouse, storage building, warehouse AAF, warehouse AC and warehouse QM. All of these property types are ancillary, and do not represent the mission of the army airfields.

TRAINING

There are nine property types in this category, of which there are examples extant in four of the property types, including bomb training building, camouflage instruction building, Link trainer building, and technical and signal school. All four of these property types appear to represent the historical significance of the mission of the army fields, in that they represent the important training that needed to take place prior to sending pilots and their crews into combat in the Europe or Pacific theaters during WWII.

However, none of these four buildings retain sufficient physical integrity to be considered eligible for the National Register.

The Bomb Trainer Building (#57) at Ainsworth Army Airfield in 1991 was in a deteriorated condition with multiple broken windows, missing siding material and missing doors, however, its original fabric, and much of its historic interior was intact. However, in 2000, during the re-survey, it was discovered that, though the building is extant, it has been completely renovated with vertical metal siding and new doors, with the windows completely covered. Therefore the Bomb Trainer Building at Ainsworth is not eligible for the National Register.

The Camouflage Instruction Building (#T121) at Scottsbluff Army Airfield, though originally was most likely a wood frame building with tar-paper siding, or at best, asbestos shingle siding, now has vertical metal siding and a new metal door. It no longer retains its WWII era physical integrity and cannot be considered eligible for the National Register.

The Link Trainer Building (#806) at Harvard Army Airfield was found to be in good condition with original integrity in 1991. The Link Trainer buildings were designed to hold the Link Training apparatus, which was a celestial navigation instrument. The building was a one story frame building with low pitched gable roof, four windows on the south side, and asbestos shingle siding. In 2000, during the resurvey, though the building was extant, it had been completely covered with vertical metal siding, and all of the windows were covered. Therefore, the Link Trainer Building at Harvard no longer retains its WWII era physical integrity and cannot be considered eligible for the National Register.

The Technical & Signal School Building (#117) at McCook Army Airfield is most likely extant, though lack of a site map during field inventory made it difficult to ascertain that for a fact. All of the extant buildings at McCook are of original construction materials, however, most are in a very deteriorated condition. If the Technical & Signal School Building were to be considered eligible for the National Register sometime in the future, it would need to be evaluated carefully to determine if it has sufficient physical integrity to justify nomination as an individual building. Since McCook's mission was to train heavy bombardment troops, the Technical & Signal School Building would have been an important component of the overall mission of the base.

MISCELLANEOUS

There are five property types in this category, represented by extant examples in three property types, including base engineering shop, chapel, and house & garage. Of these three properties, the chapel (at Lincoln Army Airfield) has been listed on the National Register of Historic Places in 1993.

In summary, it is the opinion of Barbara Kooiman of Mississippi Valley Archaeology Center, that the following properties, utilizing registration requirements, are potentially eligible for the National Register of Historic Places.

NATIONAL REGISTER POTENTIALLY ELIGIBLE PROPERTIES:

- Ainsworth - Norden Bombsight Storage
- Alliance - Fire Station (304)
- Fairmont - all buildings, apron, taxi-way, main runway (as district)
- Grand Island - Hangar, National Defense (#2)
- Kearney - Steel Hangar (385)
- Scottsbluff - Fire Station (T323)

CULTURAL RESOURCE MANAGEMENT PLAN

OWNERSHIP RESPONSIBILITY

The WWII era Army airfields of Nebraska are located all over the state, and have a number of different owners, and thus a number of different levels of responsibility.

STATE OWNERSHIP

The four sites which are owned by the Nebraska Department of Aeronautics (Bruning, Fairmont, Harvard and Scribner) are the most obvious in the level of responsibility because of their operation utilizing federal funds. The Nebraska Department of Aeronautics utilizes both state and federal funds in carrying out their operations, and they are responsible for Section 106 review of their National Register properties. Therefore, they need to consult with NeSHPO for all of the projects that they conduct which will impact on the National Register eligible properties under their ownership.

MUNICIPAL OWNERSHIP

Municipalities may be responsible for further preservation of the former WWII era army Airfields which they now own, depending on the funding for permitting and licensing necessary for their projects. The airfields at Ainsworth (all), Alliance (all), Grand Island (part), Kearney (part), Lincoln (part), Scottsbluff (all) all fall under this category. If the municipalities are receiving funds from the Nebraska Department of Aeronautics (D of A) (who receive their funds, in part, from the federal government) the local municipality is required follow appropriate mitigation, as established by agreement between the D of A, the Nebraska State Historic Preservation Office (NeSHPO), the Federal Aviation Administration (FAA) and the Advisory Council for Historic Preservation (ACHP) through the D of A and the Nebraska State Historical Society (NSHS) on any property which they own which has been determined to be eligible for the National Register of Historic Places.

PRIVATE OWNERSHIP

Private owners have the lowest level of responsibility when it comes to the preservation of these sites. Parts of the former Grand Island, Kearney and Lincoln airfields are privately owned. All of the former McCook airfield is privately owned. In these cases, recent field investigation has noted a high level of neglect to the buildings, including many alterations and demolition which have changed their physical integrity, and, in a few cases, a high level of appropriate preservation (as in the case of the Lincoln Chapel). Unless the private property owner is receiving some sort of federal funds or assistance that are impacting their World War II era National Register eligible properties, they are not legally responsible for further preservation efforts.

NATIONAL REGISTER JUSTIFICATION

AINSWORTH - NORDEN BOMBSIGHT STORAGE

The Ainsworth Norden Bombsight Storage building is eligible for the National Register on the local and statewide level under Criterion A for its significance to the mission of the Ainsworth Army Airfield of training pilots in aerial surveillance, reconnaissance and bombing. The classified Norden Bombsight, which was stored in this two chamber vault, was critical to that mission. Though there are other Norden Bombsight Storage buildings on other airfields around the state (one at McCook which is listed on the National Register in 1993), the Bombsight Storage building at Ainsworth maintains a high level of integrity, with both of its steel vault doors intact.

ALLIANCE - FIRE STATION (304)

The Alliance Fire Station is eligible on the local level under Criterion A for its importance in allowing the Alliance Army Airfield to carry out its critical mission of training pilots and paratroopers. The fire station enabled the troops to carry out this mission by having fire fighting equipment and crews available at all times, to save crashed aircrews, preserve life and preserve critical equipment used during training missions. This building retains a very high degree of physical integrity, with its original wood and tar paper siding, original doors, and original interior floor plan. The front section of the building housed fire fighting equipment and the intact rear section housed the firefighters themselves.

FAIRMONT - ALL BUILDINGS, APRON, TAXIWAY, MAIN RUNWAY (AS DISTRICT)

The Fairmont Army Airfield is eligible for the National Register as a district at the local and state levels under Criterion A as the best remaining example of a World War II era Army airfield remaining in Nebraska. Originally, 275 buildings assisted Fairmont AAF in their function as a final training installation for B-29 bombardiers. It was from Fairmont AAF that Col. Paul Tibbets selected his bomb crew for the eventual flight of the *Enola Gay*, which dropped the first combat atomic bomb over Hiroshima, directly leading to the end of the war. Though there are fifteen extant buildings remaining, including three squadron hangars, and one maintenance hangar, the layout of streets, the existence of the hangars, and the post commander's house aid this site in giving the visitor the best remaining feeling for the historical activities that happened there during World War II, more so than any other extant army airfield in Nebraska. Currently owned by the Department of Aeronautics and run as a state airfield, the buildings are well maintained and the airstrip and aprons are in good condition. A more detailed survey, including streets, contributing and non-contributing buildings and structures, as well as landscape features will be needed to document this property as a historic district.

GRAND ISLAND - HANGAR, NATIONAL DEFENSE (#2)

The Grand Island National Defense Hangar is eligible for the National Register at the local and state levels under Criterion A for its historical significance as one of a handful of extant facilities which were utilized for national defense prior to the full force war effort which spawned the later construction of hundreds of army airfields around the country shortly after. This building retains a high level of physical integrity with its original siding and windows.

KEARNEY - STEEL HANGAR (385)

The Kearney Steel Hangar is eligible for the National Register at the local level under Criterion C as a unique, quonset type steel constructed hangar built during World War II. Though more research will be needed to determine the motivation of constructing a hangar of this type, with this kind of material during the war when steel was a restricted material, it retains a very high level of physical integrity, with its original interior and exterior plan and materials.

SCOTTSBLUFF - FIRE STATION (T323)

The Scottsbluff Fire Station is eligible on the local level under Criterion A for its importance in allowing the Scottsbluff Army Airfield to carry out its critical mission of training. The fire station enabled the troops to carry out this mission by having fire fighting equipment and crews available at all times, to save crashed aircrews, preserve life and preserve critical equipment used during training missions. This building retains a high degree of physical integrity, with its original asbestos shingle siding, original doors, and original interior floor plan. The front section of the building housed fire fighting equipment and the intact rear section housed the firefighters themselves.

PRESERVATION DOCUMENTS

PROGRAMMATIC MEMORANDUM OF AGREEMENT

The most expeditious way of managing a large number of properties, particularly such as these, which are distributed across the state, which will be managed by one state agency (in this case, the Nebraska Department of Aeronautics, under the direction of the Federal Aviation Administration) is through a Programmatic Memorandum of Agreement, or PMOA.

Components of the PMOA will include answering the following questions:

- What, specifically are the properties covered under the PMOA?
- Where will the proposed mitigation occur? Describe the boundaries of the mitigation area.
- What action is being proposed as a provision to mitigate or avoid adverse effects?
- What is the purpose of the provision? Does it mitigate or minimize adverse effects?

- Who is responsible for implementing the provision? Who does the responsible party need to consult with and do they need to obtain approvals with the consulting group/agency in order to finalize the provision prior to implementation?
- When in project planning phases is the provision to be implemented? How long does the responsible party have to complete the terms of the provision?

Language should be clear and understandable to all parties who will be using the PMOA. Write it in such a way so that a layman or a reader of the PMOA who is not familiar with the agreement understands what is said. Include all provisions that were agreed upon. If an agreed-upon understanding is not put in the PMOA, it may not be binding at a later date. Finally, a way of monitoring the performance of the PMOA should be spelled out in the document.

NATIONAL REGISTER OF HISTORIC PLACES

NOMINATIONS/DETERMINATION OF ELIGIBILITY DOCUMENTS

Though the individually eligible properties may not need further documentation to establish their National Register eligibility, it is still recommended to prepare Determination of Eligibility documents or National Register nominations for each of these properties.

The Fairmont Army Airfield will need further documentation and evaluation with maps to determine contributing and non-contributing properties, the boundaries of the potential historic district, and to establish the current physical integrity of each building. Though not necessary for a National Register document, there is a great deal of local pride in this site, and oral interviews are likely possible with local residents which may give more insight on the function of each of the extant buildings, and the day-to-day activities which occurred during the active years at Fairmont Army Airfield.

HISTORIC INTERPRETATION

Most of the former army airfield sites are marked with historic markers which were installed through the NSHS historic marker program. Many of the local communities and historical groups have had anniversary events at the former airfields. Further interpretation could include:

Historic WWII Era Army Airfields of Nebraska brochure;

Popular publication about the airfields;

Oral history programs to record the recollections of former trainees/soldiers and civilians who worked at the Nebraska airfields.

CONCLUSION

The Nebraska State Historical Society has viewed this project as a means to compile information about the aviation-related facilities in the State of Nebraska. From this study has come a historic context document for both the WWII era Army airfields of Nebraska, putting it within a nation-wide context, yet viewing it at a state-wide and local level as well. A state-wide context for civilian/municipal aviation has also been prepared, allowing the Nebraska State Historical Society and the Nebraska Department of Aeronautics to understand the historical significance of the aviation movement in Nebraska in general, and by building a framework in which to understand the construction, development and use of individual airports and airfields throughout the state. Both of these documents can be used, in part, as planning tools for future development, use, abandonment, and demolition of properties on all of these facilities.

Nebraska has been one of the leaders in aviation history throughout the twentieth century, and the information in this document emphasizes this importance. The historic building inventories documented through this project will give the Nebraska State Historical Society and the Nebraska Department of Aviation the tools with which to further manage the historic preservation needs and requirements for individual buildings on municipal and state airports, as well as how to manage the development of entire airports, in regards to their historic resources.

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APPENDIX A

CONSTRUCTION PROJECTS AT MUNICIPAL AIRPORTS IN NEBRASKA 1947 THROUGH 1960

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THE UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

WASHINGTON, D. C. 20250

**Construction Projects at
Municipal Airports in Nebraska
1947 through 1960**

All of the following construction projects which are listed include only substantial buildings, such as administrative buildings and hangars. Omitted will be runway, lighting, landscaping and grading, and other similar projects. All information was taken from the Annual Reports of the Department of Aeronautics, State of Nebraska, 1947 through 1960. These reports are on file at the Department of Aeronautics.

1947

(No buildings constructed. All projects included the construction of turf landing strips.)

1948

(No buildings constructed. All construction was for turf or concrete landing strips.)

1949

(No buildings constructed. All construction was for turf or concrete landing strips, and site preparation, drainage and fencing).

1950

First year for High Intensity Runway Lighting, installed at Grand Island, Omaha and Lincoln.

Blair - one story concrete block airport administration building (with basement)

Curtis - one story, 24 x 40 foot metal airport administration building (no basement)

Lincoln - four story brick and reinforced concrete airport control tower with office space.

Superior - one story metal airport administration building (no basement)

York - one story brick veneer airport administration building (no basement)

1951

Beatrice - one story brick airport administration building (no basement)

Crete - one story concrete block administration building (no basement)

David City - one story metal airport administration building (no basement)

Hartington - one story metal airport administration building (no basement)

Lake McConaughy - one story metal administration building (no basement)

Minden - one story metal airport administration building (no basement)

Neligh - one story concrete block airport administration building (no basement)

North Platte - one story brick airport administration building, 146 x 50 feet

Ord - one story metal airport administration building (no basement)

Stuart - Atkinson - one story metal airport administration building (no basement)

Wahoo - one story metal airport administration building

State-Owned Airfields at Fairmont, Bruning, Harvard and Scribner - hangars covered with white asbestos siding to make them permanently weather-proof.

1952

Bassett - one story metal airport administration building

Bloomfield - one story metal administration building

David City - one 40 x 30 foot metal covered storage hangar and one 42 x 36 foot metal covered shop hangar with built-up roof and concrete floor.

Curtis - three storage "T" hangars

Holdrege - one story masonry (glazed tile) combination administration building and shop hangar with concrete floor.

Humboldt - one 65 x 28 foot metal covered combined storage and shop hangar.

Imperial - one story metal airport administration building.

Minden - one 65 x 28 foot metal covered shop and storage hangar with concrete floor.

Rushville - one story metal airport administration building.

Sidney - one story metal airport administration building.

Trenton - one story masonry (glazed tile) airport administration building.

1953

Chambers - one 40 x 40 foot metal shop and storage hangar with concrete floor.

Mitchell - one story metal airport administration building

Valentine - one story metal airport administration building (first large metal administration building to be constructed within the state.)

York - rehabilitation of hangar (painting, rust inhibition)

Fairmont State Airfield - construction of modern administration building.

1954

Ainsworth - remodeling of administration building

McCook Municipal - modern brick and glazed tile administration building, one 4-place multiple all metal storage hangar.

Scottsbluff - one story brick administration building (including weather bureau, CAA communications, air line operations, ticket counters, restaurant, public lounge).

1955

Blair - remodeling administration building.

Omaha - modifications and addition to administration building, including the erection of control tower on building.

1956

Auburn - new airport, land acquisition, no buildings

Sargent - three-unit multiple "T" hangar.

Scottsbluff - five-unit multiple "T" hangar

1957

Auburn - 3-unit multiple "T" hangar

Mitchell - 4 - unit multiple "T" hangar

1958

Auburn - additional unit multiple "T" hangar

Fairbury - addition to existing administration building, which provides for a modern waiting

room, snack bar and manager's office, and a new flat roof over entire structure.
Gordon - 4-unit multiple "T" hangar with shop
Ord - 4-unit "T" hangar
Oshkosh - land acquisition for entire airport site

1959

Gordon - the State donated a 24 x 40 foot Steelex metal building which the city of Gordon had constructed as an airport administration building.
Grand Island - addition to terminal building
Harvard State Airfield - 4-unit multiple "T" hangar
Hastings - 6-unit multiple "T" hangar
Holdredge - 3-unit multiple "T" hangar
O'Neill - one story masonry administration building

1960

Alliance - new masonry administration building including air conditioning

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APPENDIX B

TABLE OF AIRPORTS IN NEBRASKA 1939 to 1960

2100-1000

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BUREAU OF THE ARMY

**Table of
Airports in Nebraska
1939 to 1960**

Year	Municipal	Commercial	Personal Use	Private	State	Federal Government	Total
1939	29 (civil)	no info	no info	no info	no info	1	no info
1940	50 (civil)	no info	no info	no info	no info	1	no info
1941	55 (civil)	no info	no info	no info	no info	no info	no info
1942	no info	no info	no info	no info	no info	no info	no info
1943	no info	no info	no info	no info	no info	no info	no info
1944	13 (civil)	no info	no info	no info	no info	no info	no info
1945	45 (civil)	no info	no info	no info	no info	no info	no info
1946	123 (civil)	no info	no info	no info	no info	no info	no info
1947	no info	no info	no info	no info	5	no info	123
1948	no info	no info	no info	no info	5	no info	232
1949	no info	no info	no info	no info	5	no info	278
1950	61	39	149	none	4*	2	255
1951	65	30	154	none	4	2	255
1952	65	31	144	24	5**	0	269
1953	65	28	131	24	5	0	257
1954	66	23	132	22	6***	0	251
1955	66	20	134	20	6	2	248
1956	66	19	130	21	6	2	244
1957	67	17	123	25	6	2	240
1958	69	16	126	24	6	4	245
1959	71	15	125	29	6	3	249
1960	75	12	148	no info	6	5	246

Table of Airports in Nebraska 1939 to 1960

- * removed McCook former AAF (to city)
- ** added McCook former AAF (from city)
- *** added Lake McConaughy

All of the above information was taken from the Annual Reports of the Department of Aeronautics, State of Nebraska, 1946 through 1960. And Nebraska Aeronautic Commission, 1940, 1943, 1945.

APPENDIX C

ASSOCIATED PROPERTY TYPES FOR ARMY AIRFIELDS IN NEBRASKA

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1900

THE UNIVERSITY OF CHICAGO

1900

THE UNIVERSITY OF CHICAGO

APPENDIX C
ASSOCIATED PROPERTY TYPES FOR
ARMY AIRFIELDS IN NEBRASKA

Administration

Administration Building
Air Inspectors Office
Aviation Squadron Bldg.
Base Headquarters
Coal Office (1)
Dispatchers Office
Field Office
Finance Office
Group Headquarters
Office Building
Operations Bldg - Type A (1)
Operations Bldg - Type B
Operations Bldg - Type C
Post Office
Processing Bldg
Provost Marshall
Quartermaster Office
Supply and Administration
Telephone and Telegraph Bldg

Armaments & Munitions

Black Powder Magazine (1)
Bomb Storage Revetment (1)
Bombsight Storage - A (1)
Bombsight Storage - B (4)
Chemical Warfare Warehouse.
Demolition Bomb Storage
Disposal Bldg
Firing Range Magazine
Pyrotechnic Bldg
Pyrotechnic Magazine
Segregated Storage Magazine
Small Arms Ammunition
Storage
Small Arms Bldg
Underground Magazine
Signal & Ordnance Warehouse

Barracks and Mess

Barracks E.M.
Barracks & Lavatory
Civilian Mess (1)
Guard Barracks
Mess E.M.
Mess-Patients
Nurses Quarters

Officers Mess
Officers Quarters
Post Engineers Compound

Commissary, Clubs & Recreation

Commissary
Non-Commissioned Officers
Club (1)
Officers Club
Post Exchange
Recreation Bldg
Service Club E.M.
Theater

Flight Support - Misc.

Acetylene Storage Shed
Alert Bldg
Control Tower
Crash Truck Station
Day Room
Engine Cleaning Shop
Night Lighting Vault (1)
Parachute Bldg (1)
Photo Lab
Radio Range Bldg
War Room Bldg
Ward Bldg

Hangars

Hangar - Maintenance (1)
Hangar - Natl' Defense (1)
Hangar - Squadron (6)
Hangar - Sub-Depot (3)
Hangar - Transit
Hangar - Unknown (3)

Health Facilities

Dental Clinic
Flight Surgeon
Hospital
Infirmary

Physical Plant

Blacksmith Shop

Boiler House (1)
Boiler Plant
Carpenter Shop (1)
Chlorination House
Coal Storage
Electric Shop
Elevated Water Tower
Fire Station (2)
Gas Changer
Gasoline Station
Generator House
Grease Rack
Incinerator (1)
Machine Shop (1)
Motor Pool Shop (1)
Motor Repair Shop (4)
Oil Storage (4)
Paint & Dope Storage (3)
Pump House (1)
Reclamation Shop
Transformer Vault (1)
Utility Shop
Wash Rack
Water Storage Tank (1)
Water Tower (3)
Well House (2)

Storage

Clothing & Equipment Bldg
Engineers Warehouse
Equipment Shed (2)
Hut
Post Engineering Warehouse
(2)
PX Warehouse
Storage Bldg (2)
Storehouse
Supply Room
Warehouse - AAF (14)
Warehouse - AC (1)
Warehouse - QM (5)

APPENDIX C **ASSOCIATED PROPERTY TYPES FOR** **ARMY AIRFIELDS IN NEBRASKA**

Training

Bomb Trainer Bldg (1)
 Civilian Personnel Training
 Camouflage Instruction Bldg
 (1)
 Communications School Bldg
 Ground Training Bldg
 Link Trainer Bldg (1)
 Navigation Trainer Bldg
 Radar School
 Technical & Signal School (1)

Misc.

Base Engineering Shop (1)
 C and P Shop
 Chapel (1)
 Gate House
 House and Garage (1)
 Lavatory
 Officers Barber Shop
 Sentry Box

* Numbers in parentheses (*) indicate the number of extant buildings/structures of this particular building type in each of the property type categories as of April 2000.